AMERICAN BEE JOURNAL

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The Way It Looks to Me

By Harold Albaugh
Michigan

I AM a newcomer to Michigan beekeeping and I have been told that, without the precedent of 30 cent honey in the background, I might be able to put a little different thought into the picture of beekeeping and perhaps a little of the enthusiasm that seems to affect all beginners in this highly interesting profession.

While I have been interested in bees since a small boy on the farm, it has only been in the last four or five years that I have devoted a major part of my time to beekeeping. Years of hard work and close confinement in large cities in manufacturing and selling in this fast moving age, has led me to appreciate more fully the romance of beekeeping in the open air of "God's Country."

In these difficult times, one certainly has to be an optimist to work up enthusiasm for any line of endeavor. I am not nearly as pessimistic as the boys around the State Capitol. Since election they tell me over there, they have been so worried they have to screw their hats on and off. That is one thing the matter with all of us. We do too much worrying and not enough constructive thinking. It will take more than a few new faces in the State Capitol, a few new postmasters or new presidents to pull us out of our difficulties.

But to get back to the bees, I believe we all agree that the general drop in commodity prices has been less in honey than in many other farm products. On my place I have stored a crop of red kidney beans. A few years ago these beans were worth $12.00 per hundred. Today I cannot sell them for enough to pay the threshing bill. The past few weeks, wheat has sold for less than at any time since Queen Elizabeth's reign.

I live near Greenville, in the heart of the potato district of Michigan, and one of my neighbors bought a 60-pound can of fall honey at 5 cents per pound for which I was to receive $3.00 worth of potatoes. He filled the bin in my basement with ten bushels of U. S. No. 1 potatoes and insists that I still have 15 bushels more coming. Fat hens are quoted in our local paper at from five to seven cents per pound.

Not a very pleasant picture. However, in checking the government marketing report for the fall of 1929, we find white honey moving at from seven to eight cents per pound. That does not compare so unfavorably with today's market price of around five cents per pound.

Frank A. Vanderlip, a former president of the National City Bank of New York gives us the following picture of the decline in security values: The quoted value of all stocks listed on the New York Stock Exchange on September 1, 1929 was approximately $90,000,000,000. On July 1, 1932 the quoted value of all stocks on the New York Exchange was slightly under $16,000,000,000. Stockholders have lost $74,000,000,000.

I will not dwell on this picture. The effect is so far reaching that it has already given a headache to all of us, but I cannot help mentioning it to illustrate the point that our product and equipment has not suffered nearly as much as almost every other line.

Mark Sullivan tells us that while the farmer may wish and hope, the hard reality remains, that he literally cannot pay his taxes and interest at today's price level. It is as unescapable as mathematics and as inexorable as that four line verse which should be printed on the walls of every school room "That two and two make four, and never five or three. The heart of man is sore and ever more shall be."

There are many things, however, during this trying period that have been of help to beekeepers. In the first place, while our export trade has been penalized by retaliatory trade barriers combined with world wide depression and unfavorable money exchange, the large export honey has been thrown on the home market. Was it bought and stored to stabilize its price? No, it was dumped at whatever price it would bring and consumed by our own people who, as a result, have become honey conscious, and have created an appetite for honey so they will continue to use it in even greater quantities when financial conditions enable them to do so.

A number of years ago, before the mobilization of the powerful sugar interests, honey was used in the bakery trade to a limited extent. As late as 1910, the National Biscuit Co. carried a stock advertisement offering to buy honey. Since then, the sugar interests have worked out all manner of formulas to invert their product so it could in a measure replace honey. During this time, beekeepers have allowed the substitution to go on with hardly a protest.

The past twenty years have witnessed an almost revolutionary change in our habits of living. The art of home baking has become almost as dead as the Latin language. Large baking trusts have sprung up and expanded to almost unbelievable proportions. Unfortunately, little or no effort, up to a few years ago, has been expended by beekeepers to induce bakers to use honey in their products. The difference in the price of sugar and honey has been so great that little honey has been used. One of the principal seasons, however, has been the lack of intelligent organization to approach these potential big users and prove to them the advantages of honey. In other words, so far as this phase of the industry is concerned, we have been asleep at the switch.

I want to say right now, in as

strong words as my command of English will permit, that the American Honey Institute is one of the greatest assets that the beekeeper has. "It's our baby" and if we don't support this one organized weapon which we have to put honey in its place, we do not deserve a future for our product.

I firmly believe there is not a beekeeper in the industry but has reaped advantage from the limited work this crippled organization has been able to do; crippled because the most of us have given nothing to its support.

I wish I were able to express myself fluently on this subject. A few weeks ago I heard Mr. Kelty give a talk to beekeepers with a combined production of something more than a million pounds per year. Kelty's talk was about the merits of the Institute. It was enlightening and masterful and followed by a round table discussion, yet not one word was said personally to those million pound honey producers to solicit the small amount of one per cent of the honey for this great work. Not one pledge card was handed out. It seems almost a crime to miss a golden opportunity like this and it would seem that beekeepers should have a committee to care for these occasions.

There is not a successful industry today that can exist without organization and advertising, and when we stop to think of the thousands upon thousands of bakeries, candy and other manufacturers who would be large users of our product but for the lack of a few cents for printing formulas and so on, which the Institute cannot send because of lack of funds, it seems a shame.

Mr. Kelty tells us that in Michigan they have some 23,000 beekeepers, and about 215,000 colonies of bees. Our crop annually runs from 11,000,000 to 15,000,000 pounds and from 278,000 to 350,000 pounds of wax. At the present prices, our crop in Michigan sells for from $1,500,000 to $2,000,000 per year and more in normal times. Just imagine what one per cent of 15,000,000 pounds of honey would do for the Institute, from Michigan alone.

I look to the future of beekeeping with confidence and enthusiasm. Confidence because I am convinced that through reduced operating costs, and larger production, we are reducing the margin between honey and its substitutes. The closer the margin to other competitive sweets, the greater the volume of consumption.

This, I believe, accounts for the record breaking sales of five-pound pails this year. Have you noticed that five pound pails of syrup have almost disappeared from retail stores? Do you realize the tremendous market our cheap pails of honey have opened up? I say with firm conviction that cheap honey has made markets for the beekeeper.

Changed conditions require changed methods and I believe the day of the small beekeeper, who hopes to realize a year's living from a few months' work is past. The small beekeeper is a valuable addition to our ranks. Without him and his cooperation we would be in a bad way, but he must either produce more honey or diversify in other lines if he is to exist under present conditions.

I believe, like that grand old Michigan beekeeper and editor, W. Z. Hutchinson, who said "There is nothing that goes quite so well with beekeeping as more bees." Keeping more bees and keeping them better is a secret of success. This I know in times of surplus and lack of market seems to be poor advice, but we must remember we have two ways to go, forward or backward, and, if honey had its rightful place in our diet, we would find that only a small percentage of our requirements are now being produced.

It looks to me as though it is up to us to get our share and let the sugar trust and corn interests fight for theirs too. Either that or fold up our tents and desert the field. A favorable price ratio with competitive sweets will create such a demand for honey as will be beyond our fondest dreams.

Remember the careful beekeeper who takes care of his equipment isn't at the mercy of fast depreciating factories with uncontrolled overhead such as high salaries, interest, bonded indebtedness, stockholder's dividends, and so on. The successful beekeeper must not only be a good beekeeper, but he must be a good business man. He must expect to be on the job twelve months of the year and schedule and budget his time and income as any successful business does. As the demand and market become stabilized, we should endeavor to sell the greater part of our product in bulk.

In fact, I believe one of our great troubles today lies in too much competitive selling in the retail field. No stabilized price, no grade, no package. The jobber has been discouraged by this. Many times a beekeeper will sell a jobber and go out and offer his honey to the retail merchant in direct competition to the jobber.

Where carloads of honey were sold to the jobber a few years ago, this outlet has almost entirely disappeared. I do not know of a single commodity like honey that is successfully distributed to the retail merchant direct. I believe the trade of the distributor and jobber should be encouraged and cultivated to assure any kind of orderly distribution.

I do not know if this can be done, but if beekeepers' associations could devise a way to act as agents or clearing houses for distressed honey and pass it on in bulk instead of allowing it to be dumped at whatever price is offered for it by the local merchant, thereby demoralizing the market for all, it would solve one of our big problems. If we must take a sacrifice price, let us use every endeavor we can to move it in bulk and protect the retail market.

I believe ours is a problem of under-consumption and orderly distribution. The problem of overproduction is a long ways away. If the price ratio of honey with other sweets can be maintained at anywhere near a favorable balance, honey producers have hardly scratched the surface of their production.

We never have gotten over the price inflation period after the war. The old bee publications from 1900 to 1915 were bubbling over with bee enthusiasm and the romance of this great profession. I sincerely regret to see these same publications drifting more to scientific and theoretical beekeeping and neglecting the romance and adventure which was so pronounced fifteen and twenty years ago. I certainly would like to see more fire and enthusiasm. I am sure we all agree that were it gold alone we were working for, there would be few beekeepers.

I face the future confidently with new enthusiasm and new hope. Let us get our house in order and adjust ourselves to the new era we are entering. Let us not lie down, let us go on. Let us go on with our heads up. That is the spirit with which I entered the new year. We are responsible for readjusting and we certainly can do that. We are not whipped.

Let's Get Busy

Prices of honey are down and have been down for some time; but with a little effort, a little thriftiness, and hard work we beekeepers can pull through these depression days. Now is about time that we should be getting used to the depression, and adjusting ourselves and our business to it.

We should strive hard each day to keep up our bees, and equipment—such as painting hives (hives that need it), replacement of old combs with new ones with full sheets of foundation, seeing to our bees in every respect, as right now is when bees need good attention. To neglect might cause loss.

Should any of us need equipment, now is the time to buy. Prices are cheap, bees and queens are cheaper than they have been in several years. When buying bees and queens be sure you are buying from a reliable man or company so as to get the best queens and bees obtainable. Take every advantage you can, save your wax, sell for the highest price you

can, think out new schemes, fix your honey attractive, advertise it, talk it.

We really all have to get down and work, quit spending money foolishly; not going into a thing without the intention of doing it right, and in the cheapest way possible. Cut every place you can, honey producers, package and queen-bee men; but at the same time keep good quality.

Now let's all get busy and bust right on through this depression and make good times out of it.

J. R. Alsobrook, Tenn.

Sad Accident in Family of George Rea

We are informed through our friends in Gleanings and through newspaper clippings of a most deplorable accident in the family of Geo. H. Rea, beekeeper and Extension Apiculturist for Cornell University.

Mr. Rea's home was at Reynoldsville, Pa., where his family resides. His daughter, Miss Julia Rea, 21, and two sisters Misses Marie and Kathryn Rea all from the State College, Pennsylvania, motored to Reynoldsville in company with James Hildebrant and Russel Seiler of State College early on one Sunday evening to spend a few hours with relatives and friends at home.

At Port Matilda, the car collided with a freight train, throwing the automobile into the railroad passenger station. Julia Rea received a fractured skull and passed away without regaining consciousness. Misses Marie and Kathryn, while painfully cut and bruised, were discharged from the hospital a short time after and brought home. We certainly extend our sympathy to Mr. Rea, and we are sure that all of our readers will do so too.

You Are Right, Mr. Manley

Hasn't Mr. Manley a clear comprehension of the situation! (February, page 52, "Where Is the Money for Your Honey?") If we would just clear up some of the tariff walls—but since we are not likely to, will the Editor just recommend that most of us quit, to make room for the rest— ? ? ? ? .

Geo. Harrison, Virginia.

Honey-Apple-Date Salad

6 cups apples
1 cup dates
½ cup nuts
½ cup honey
½ cup mayonnaise

Mix apples, dates and nuts. Mix honey with mayonnaise, add to first mixture. Heap on lettuce leaves. Makes fifteen salads.

C. J. Oldenburg, Minnesota.

THE HUMAN PUZZLE

Who Is He?

So much interest was aroused over the unknown beekeeper on page 81 of last month's number, that we repeat it here with another—"Who Is He?"

Join the puzzlemakers. Guess who this beekeeper is. We gave no hints last month but from the results given here, you can judge for yourself how great the interest was. We will say for the subject of this month's guess, that he is a large and well known beekeeper, probably one of the best known in the United States.

For the first three to send in the right guess, we will send a book on beekeeping, clothbound and illustrated. If you guessed right last month and received a book, there will be no duplications because we have a complete record of every guess and of the books given.

Now, who is he?

Last Month's "Who Is He?"

—Jasper Knight, Hayneville, Alabama, beekeeper and queen breeder.

He must be well known because guesses were received from Massachusetts, New Jersey, Kentucky Ohio, Indiana, South Dakota, Minnesota, Oregon, Michigan, Illinois, Missouri, and Alabama. There were only 4 incorrect guesses—Dr. M. C. Tanquary of Minnesota; Fred W. Muth of Ohio; R. E. Foster of Florida; and D. D. Stover of Mississippi, were given.

The following were winners: Ivan Whiting, Roscoe, Illinois; H. H. Sigler, Ingalls, Indiana; Two ties for third, Voyles G. Williams, Ashland, Kentucky and Dr. R. G. Shanks Autaugaville, Alabama.

Now don't be afraid to guess again even if you guessed before; and don't be afraid to guess because you may not know who the "Human Puzzle" is. Come on, now, guess. Let's have some fun!

Cost of Producing Honey in Oregon

This is a published report put out by the Agricultural Experiment Station, Oregon State College, Corvallis, under Director Schoenfeld, and was prepared by A. S. Burrier of the Oregon Experiment Station, Frank E. Todd of the Pacific Coast Bee Culture Field Laboratory and H. A. Scullen of Oregon State College.

It is a mimeographed report of about twelve pages going into the investments in beekeeping in the state of Oregon and the cost of producing extracted honey including labor, materials, supplies, depreciation, operating costs, interest, etc. and divides the cost into regions of the state. It also covers the cost of producing comb honey and suggests changes which can be made to better the situation.

We hope to have a complete resume of this very useful study. Those interested may secure copies of this circular of Information No. 83 by writing to Oregon State Agricultural College, Corvallis, Oregon.

To satisfy our most pertinent interest, it was found that the cost per colony for extracted honey in the period covered by the report was as follows: Total net cost for a thirty pound yield with proper deductions for labor, materials and supplies, transportation, interest and depreciation, $2.68; for thirty to sixty pounds, $3.56; for sixty to ninety pounds, $4.80; for ninety pounds and over, $4.99. The total cash cost per pound was as follows: thirty pounds, 1½ cents; thirty to sixty pounds, 1½ cents, sixty to ninety pounds, 1.2 cents per pound; ninety pounds or over, 1.4 cents per pound.

More About Spiders

(A Queen-hunting Spider — February, page 55.) There are just about as many different kinds of spiders around here (Virginia) as anywhere outside of the tropics, but I have never had one get a queen unless, possibly, she was coming back from mating. We have the big kind with a spread of over an inch as described in the article referred to, and most everything in between. I have had them get inside a hive containing nucleus and pile up in a corner quite a few bee husks, but never had one get a queen.

Geo. Harrison, Virginia.

HOWARD POTTER

How Howard Potter Financed His Own Career

By A. G. Woodman
Michigan

MY attention was first attracted to a quiet, unassuming boy, Howard A. Potter, Jr., of Ithaca, Michigan, during the past four years, at beekeepers' gatherings and meetings about the state and by a few visits of his to me at Grand Rapids.

My attraction to him was increased by the presence of a pleasing young lady companion at some of these gatherings, and I was glad to see that he had time for companionship and things other than work to make life worth while. Some said to me, "There is a boy tending strictly to business," and I have replied, "Howard is so well balanced he has time for diversion also." All work and no play makes Jack a dull boy, and Howard Potter is far from this.

Howard's father, superintendent of schools of Gratiol County, Michigan, kept bees numbering from five to fifteen colonies for many years. He says that Howard was always interested in them and that in his last year of high school he worked for two and one-half months for E. D. Townsend, one of the outstanding beekeepers of Michigan, to learn something about commercial production.

When he finished high school, Howard started in at Alma College, nine miles from Ithaca, driving back and forth each day. At this time Howard's father bought and gave to him fifty-five colonies of bees to add to the six at home. During the four-year college period Howard increased these to 350 colonies, all the costs of which came out of the crops of honey secured. During 1932 Howard and two helpers ran a total of 750 colonies, 400 of them on a share basis. A total of 626 cases (120 pounds each), or 75,120 pounds of extracted honey and 4,000 sections of comb honey, were secured as the share of Howard and his helpers. One of his helpers is Barker Brown, with 90 colonies of his own included in the 750 mentioned, who is another college boy, attending Ann Arbor. Howard, however, is the active managing member. The owner of the share bees, Mr. Flickinger, received approximately 1000 to 2000 sections of comb honey, 4500 pounds of chunk honey and about 60 cases of extracted honey.

In addition, ten colonies were run for a farmer near Ithaca, the farmer being given one-third of the crop for his share, and 6 cases of honey was turned over to him. Figuring this at 5 cents, a fair average wholesale price for this year, the farmer would have $36.00 without turning a hand for his investment, which probably would not exceed $100.00, or 36 per cent return. That's a pretty good bargain.

After the early extracting was finished they thought they were through, but later they were able to extract 128 cases, or 15,360 pounds more. The honeyflow continued through most of August.

Remember that this beekeeping success has been developed during a four-year college course at Alma College and that Howard drove by automobile nine miles to get to school. The work was done during week-ends and vacations, with just a little hired help.

In the summer of 1932, at the age of 21, Howard graduated from Alma College with the highest honors the college could give, rating two and a half honor points, and he won a scholarship at Harvard, where he is now specializing in chemistry.

Even now he still carries on his bee business. His father hired some help and directed the work of putting the bees up for winter, which Howard will finance out of his returns from the honey. Howard was home the last of December for Christmas and at once took up the work of getting equipment ready for 1933.

I want to impress you that this boy is not a chesty, windy, or important fellow, but is very quiet and unassuming, and that I did not get this information about him without considerable questioning, particularly of his father.

Howard's success is so outstanding and unusual that it deserves repeating to serve as an inspiration to others. It should be especially inspiring to young folks among our beekeeping families, who need this kind of inspiration to help them along the road.

Think of the wonderful business experience that was obtained from this beekeeping business. What a tremendous advantage young Potter will have over the average run of college graduates when he gets out into the world. This kind of experience for any young man from any kind of a similar program would be well worth fostering by parents everywhere.

Alabama Queen Breeders Pledge Institute Support

The Alabama queen breeders have furnished an excellent example of organized support for the American Honey Institute. Headed by their very efficient State Apiary Inspector, Mr. Thomas Atchison, these queen breeders have pledged 50 per cent greater support than they did the past year. Subscriptions for the 1933 year are as follows:

David Running, Sumterville, $10; J. M. Cutts & Sons, Montgomery, $10; Jasper Knight, Hayneville, $15; Hayneville Apiary Co., Hayneville, $10; H. C. Short, Fitzpatrick, $10; Bolling Bee Company, Bolling, $10; Citronelle Bee Co., Citronelle, $10; M. C. Berry & Company, Montgomery, $25; Alabama Apiaries, Mount Pleasant, $10; W. J. Forehand & Son, Ft. Deposit, $7; V. R. Thagard & Co., Greenville, $5; Taylor's Apiary, Luverne, $5; J. F. McVay, Jackson, $5; P. M. Williams, Mt. Willing, $5; Crenshaw County Apiaries, Rutledge, $5; N. B. Smith, Calhoun, $5; J. H. Waidel, Sumterville, $3; Caucasian Bee Co., Repton, $3; E. F. Day, Honoraville, $2.50.

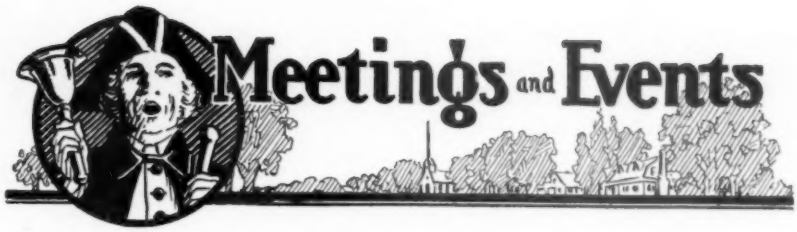
Other queen breeders throughout the South have pledged support to the Institute again this year. D. D. Stover of Tibbee Station, Mississippi, besides being a Director of the Institute is an enthusiastic supporter, as is T. W. Burleson of Waxahachie, Texas. These breeders and package bee shippers realize that their business is greatly helped when the Institute broadcasts the value of honey and induces the consumer to buy it.

Death of Samuel Cushman

Just as we go to press, we are informed of the death of Samuel Cushman of Chicago, Illinois. Mr. Cushman, as a beekeeper, had a long and eventful career. For years he was a prominent figure in eastern beekeeping circles, being one of the first teachers of beekeeping in the United States, at the Rhode Island State College.

In middle life, he moved to Illinois, locating at Chicago, where he was active in beekeeping until the time of his death. We hope to say more about Mr. Cushman in our next issue.

He suffered a stroke of paralysis early in January which made him nearly helpless. He died in the evening of March 3rd and was buried at Pawtucket, Rhode Island on March 7th.



The Honey Producers' League

The St. Louis meeting of the American Honey Producers' League, Feb. 27 to March 1, was a very successful one. The attendance was much above expectations with beemen present from Wyoming to Washington, D. C., and from Minnesota to Texas and Alabama. Held in connection with the American Honey Institute and the Apiary Inspectors of America there was a special inducement to be present.

Greetings were offered by officials on behalf of the city of St. Louis, the State of Missouri and the Missouri Beekeepers' Association. The program was varied but gave special attention to the cooperative work of the various industries which are featuring honey in connection with their own advertising programs. Miss Annette Snapper of the Pabst Corporation gave a very interesting account of the changes in buying habits of the housewife. To get the information, she made a house to house canvass of certain districts covering homes in different income classes. Her suggestions were extremely valuable to the salesman offering a food product.

Miss Mildred Day of the Kellogg Company, outlined the possibilities of finding outlets for honey through hospitals, and public institutions of various kinds. Mrs. Bickford of the Kitchen Aid Company, discussed the subject of consumer education through cooperation.

In somewhat similar tread, Dr. Wm. C. Wilson talked of honey for health. This phase of market development through the education of the public is of increasing importance.

But little time was devoted to discussion of practical beekeeping problems. O. W. Hickel of St. Louis, discussed marketing. Since he has some unusual publicity by means of radio he is in a position to tell an interesting story.

J. F. Diemer of Liberty, Missouri's old patriarch, discussed races of bees; E. R. Root talked of the importance of beekeeping to the public at large, and Frank C. Pellett spoke concerning "Some Famous American Beemen." K. C. Sullivan, Missouri State Apiarist and Plant Commissioner, discussed the needs of Missouri beekeeping.

Much time was devoted to business matters. It was decided to postpone consideration of action in regard to the name and constitution of the organization to a later time.

Officers elected for the current year are: James Gwin, president; E. G. LeStourgeon, vice-president; V. G. Milum, Secretary; Directors: C. A. Reece, H. C. Short, T. W. Burleson, H. D. Rauchfuss, and William A. Weir.

Space will not permit an account of the details of the banquet which was a happy occasion with Mr. Hickel as toastmaster. The next convention will probably be held at San Antonio.

American Honey Institute Meeting

The American Honey Institute held its annual meeting at Hotel Statler, St. Louis, Missouri on Monday, February 27th. The following directors were present: L. W. Parks, E. R. Root, D. D. Stover, L. C. Dadant, Geo. Lotz, H. D. Rauchfuss, C. D. Cadwallader, E. G. Brown, Secretary-Treasurer Malitta Fischer Jensen and her assistant, Lavonne Taylor.

President L. W. Parks gave a very complete review of the work accomplished by the Institute during the past twelve months. The new contacts have been numerous and of inestimable value to the honey industry. The number of contacts made and the advertising for the Institute has been limited only by the funds available for expenditure.

Mrs. Jensen gave a report of the work done by the Institute during National Honey Week in November. The broadcasts alone during that week over the national systems would have cost the beekeepers not less than $10,000.00. These broadcasts do not include the numerous ones given over local broadcasting stations by beekeepers and educators interested in the work of popularizing honey. Mrs. Jensen showed plainly that even if the Institute were organized for National Honey Week only, it would be worth many times the money expended by the beekeepers and supply manufacturers. When it is considered that the Institute is at work fifty-two weeks in the year, it can easily be seen how much benefit the industry is getting through the expenditure of a comparatively small sum.

Due to the fact that the manufacturers of bee supplies are no longer able to give the extended support that they have in the past, it was decided to make an intensive campaign among beekeepers for the support of the Institute. Considering that the beekeeper gets the first benefit from the advertising of honey, there is no question that his support will be greater if he is made to see the need for his contributions.

During the meeting, Mrs. Jensen gave "demonstrations selling honey." She also appeared in one of the largest food stores in St. Louis and gave two wonderful demonstrations to the public. These demonstrations were advertised in all of the St. Louis papers. Mrs. Jensen also made two broadcasts over the St. Louis broadcasting station. Without question, the meeting of the American Honey Institute and of the American Honey Producers' League did much to bring honey to the attention of beekeepers throughout the city of St. Louis and throughout the entire country.

The following directors were elected to represent the Bee Industries Association (manufacturers of bee supplies)—L. W. Parks, H. H. Root, D. D. Stover, L. C. Dadant, Geo. Lotz. To represent honey bottlers and buyers—E. G. Brown. To represent honey container manufacturers—C. D. Cadwallader and G. L. Shideler. To represent queen breeders and package bee shippers — David Running. To represent beekeepers' organizations organized for profit—H. D. Rauchfuss. To represent beekeepers' organizations organized not for profit—Cary W. Hartman.

Mr. E. R. Root of the A. I. Root Company was elected President of the American Honey Institute for the ensuing year. Malitta Fischer Jensen was elected Secretary-Treasurer with Lavonne Taylor as Assistant. The Executive Committee consists of L. W. Parks, H. H. Root and E. G. Brown.

Considering the great value of the Institute to the bee and honey industry, every beekeeper is urged to give his support for the 1933-34 season.

Meeting of Apiary Inspectors

The Apiary Inspectors of America held their session in St. Louis on Wednesday afternoon, March 1st. This meeting was associated with the American Honey Institute and the American Honey Producers' League. A large number of states were represented by inspectors which resulted in a large variety of conditions being represented. There was evidence throughout the meeting of a keen desire on the part of the inspectors to approach the problems confronting the industry with some degree of uniformity. The matter of publicity was discussed very fully and frankly, but throughout it all there was a very good harmony of opinion and it is the desire of those in charge of the work that matters of this kind should be handled as nearly the same in the various states as possible.

Another item which called for uniform measures was the problem of

(Please turn to page 139)

Prices Will Rise

There is every indication that prices of many commodities have reached the bottom and that higher prices can be expected. The wise man will buy the things he needs and for which he is able to pay while he can get the advantage of the low prices. A dollar will go farther just now in many lines than for a great many years. As soon as confidence begins to return the present depleted stocks of merchandise will soon be exhausted. Replacements will then be made at higher prices. The one who has the money and does not buy to meet his needs now will soon be looking back and wondering how he could have been so short sighted as to let the low price opportunities pass him by. Package bees and queens are especially low.

The Honey Institute

Elsewhere in this issue is a brief report of the St. Louis meeting of the American Honey Institute. This organization has a wonderful record of achievement to its credit for the brief period of its existence.

Now that the formative period of the Institute is passed it should be easier to secure the necessary support for its continuance. Once having demonstrated its ability to get results the most difficult of its problems is solved.

Much credit is due to the retiring president, Mr. Lewis Parks, of the G. B. Lewis Co., who has given so much of his time to making it a success. Although little publicity has been given to his efforts, he has probably done more than any other single individual to establish the Institute. Too often it happens that unselfish service such as Mr. Parks has rendered is overlooked by those who benefit from his work.

The incoming president, Mr. E. R. Root, is so well known among the beemen that he needs no introduction. He may be depended upon to give the best possible attention to the work of the organization. He deserves our unstinted support.

Surplus As Insurance

All the proposed legislative remedies for the farm problem begin at the wrong end. Those who think they can cure the nation's difficulties by reducing the surplus must have forgotten their history.

It will do us good to get down the old bible and read again the story of ancient Israel and see how they were enslaved by the Egyptians when their surplus was exhausted. Nature has a way of disposing of any farm surplus by seasons of short production. Without a liberal reserve of food stuffs there is bound to come a time of severe suffering and hardship.

A little investigation will convince one that there never has been a time when some portion of the human race was not hungry. If that be the case there can be no surplus of non-perishable foods like wheat and corn.

The present difficulties are the result of the enormous burden of debt and taxes. Even though there was a shortage of goods, prices would still be low because of inability of the masses to buy. To attempt to force prices upward by artificial means will only increase the problems of those who are in distress. If the buying power of the unemployed can be returned there will be no trouble to restore prices.

Shall we pay the beekeeper a bounty to neglect his bees and neglect to harvest the crop? That in effect is what is proposed to do for the grain and cotton grower in the allotment plan. This bounty must be paid by those who are not so fortunate as to share in its benefits. Improvement may come in spite of such ill advised legislative programs because better times must come, but they are not likely to come as a result of such adventures. Read again the story of Joseph in Egypt and see whether a surplus should not be good insurance instead of a handicap.

Variation in Honey

Very little is known concerning the influence of soil and climate on the color and flavor of honey. Some interesting questions have come to this office of late; questions which the staff have been unable to answer. When the bees get light honey at one time and dark honey at another apparently from the same source, it arouses curiosity as to the reason. The easy answer is to say that there is a mixture of different sources of nectar, but this may not always be true. Twenty years ago, Harry K. Hill wrote in the Western Honeybee that he secured three distinct shades of alfalfa honey during the season. He stated that there could be no question that it all came from alfalfa since no other nectar was available.

In that case there could have been no difference in the soil since the honey came from the same fields. It would seem that temperature and moisture changes must have made the difference.

Since the color and quality of alfalfa honey is known to vary so greatly, it raises the question as to whether there may not be a similar variation in honey from other plants as well. It is highly advisable that such facts as come to light be recorded for the benefit of those interested in a study of this problem.

California beekeepers have stated that orange honey is much lighter some seasons than others, and at times much milder.

What Is a Good Drone?

Now that controlled mating of the honeybee is possible, we still have the most difficult problem yet to solve. The means of telling which drone among a hundred or a thousand may be the best individual is still lacking. Controlled mating is not of much value until we are able to recognize the outstanding individuals to use as parents of the coming generations.

The chances are that the breeder will select a very ordinary individual even though drones with outstanding characteristics may be available. After a long experience in breeding, it has been possible to set up certain well defined standards of perfection for cattle, horses, swine and poultry. With bees we can only measure the merits of a queen by the behaviour of her workers in gathering the harvest. If they are gentle and store good crops we decide that the mother is suitable for a breeding queen. There is no such measure for the drone. It is quite possible that the breeder will select a very poor individual whereas if mating had been left to natural selection a better result might have been obtained.

We still have a very long way to go in the breeding of bees before we can hope for such results as have come to breeders of farm animals and poultry.

A White Clover Year

Comments have been made in this Journal on several occasions concerning the change that is taking place in the bee pasture in the Middle West. White Dutch clover is giving away to sweet clover to a much greater extent than is generally recognized. However, the prospects indicate that this may be a white clover year and that the bees will soon be humming in the pastures again. Dry seasons have killed out the little white clover over wide areas. Last fall's rains have brought it back again and we hope for an old time white Dutch clover crop.

Inventions

A few years ago the bee magazines were filled with accounts of new beekeeping equipment. For a time every active beekeeper felt that he could offer a better hive and the number and variety of new hives was amazing. Of late very little activity has been manifested in this direction. It seems that we have gone about as far as we can go in the way of improvement of hives. Likewise smokers, extractors, excluders and hive tools seem to satisfy the average beekeeper.

In many respects the evolutionary period of an industry is the most interesting one. It is that period which offers the opportunity to make history and the men who blaze the trail are most likely to be remembered. Few important new inventions have appeared of late for the beekeeper.

Credit Where Credit Is Due

It is difficult to establish proper credit for important contributions to public welfare. No one individual can do much without assistance. Every important advance is the work of numerous individuals, although someone usually gets most of the credit. In too many cases it is not the one who is most entitled to it who gets the recognition.

In the case of Langstroth's invention of the bee space which is the very foundation of our present day commercial bee culture, there were many who tried to deprive him of the credit which was his due. In the end he was given general recognition, but without the assistance of several others he might even now be forgotten.

Samuel Wagner was probably the first to call Langstroth to public attention, and but for him Langstroth might have remained an obscure minister. It was Wagner who recognized the importance of the invention and persuaded him to write a book for the purpose of giving his discovery wide dissemination.

When King and others claimed that Langstroth's invention was not new, but a copy of old world hives, it was Charles Dadant who came to his defense and showed wherein his work was original. It was Dadant who saved him the credit which was his due because he alone was entirely familiar with hives in common use in Europe, and was able to point out the peculiar claims of each.

A. I. Root took the hive and placed it in the hands of the beekeepers, and thus gave it wide distribution. At that time there were no factories turning out uniform bee supplies as is the case now.

Thus it came about that after Langstroth had made an important discovery he was dependent upon several other men to bring it to public attention.

Public Appropriations

Most of the members of the legislatures of the various states now in session have been elected on a promise to reduce public expenses and thus lower taxes. There is much complaint among them that public beneficiaries refuse to cooperate in trying to reduce expenses. Most public officials contend that there is no chance to reduce expenses in their particular departments without crippling the work.

Taxes must come down in line with reduced income. Those who refuse to cooperate with legislative committees in reducing their budgets are likely to get the heaviest cuts and some will be cut out entirely.

Just now it is a matter of concern to the beekeeping industry that funds for inspection and for research may be reduced to a point which may seriously cripple the work. Let us suggest that officials will fare far better if they show a willingness to reduce their expenditures to the lowest possible level. Departments which estimate their budgets on lower levels are likely to come through with their organization intact. Those which insist on holding everything are likely to find themselves in distress.

The temper of the legislatures just now demands every possible reduction and they show marked antagonism to departments which make no show of economy.

The public income has been so far reduced that it is impossible to collect sufficient funds to continue public activities at the present level. The wise official is the one who will show a very real desire to reduce the cost of his special work to the lowest point possible without serious interference with results.

It is better for all public enterprises to be cut in fair proportion than for some to be removed entirely.

Flowers for the Living

It is with a feeling of regret that we must recognize that most of the men who have made the beekeeping industry have passed from among us. The few old timers who remain should receive evidence of our appreciation of the work which they have done.

John M. Davis, the grand old man of the South, is one who is entitled to special recognition. For more than half a century he was engaged in commercial queen breeding and devoted the most careful attention to a study of that phase of beekeeping.

Mr. Davis has always been a modest and unassuming man. Never has he pushed himself forward or made special claims for himself. He has been content to carry on diligently in the ranks and he has seen beekeeping develop from a crude and unimportant sideline to a commercial enterprise worthy of recognition. The American Bee Journal would like to see more flowers bestowed on Mr. Davis during his lifetime. It was a very appropriate action on the part of the American Honey Producers' League in electing Mr. Davis to honorary life membership, at St. Louis.

"Honey" a Magic Word

Now we see the advertising of "Bee Hive Brand" corn syrup. On the label appears the picture of a straw skep and the words "Bee Hive" in big letters. The reputation of the bee and her product are thus used to stimulate sales for a sweet made from starch in a modern factory.

Throughout the advertisement the words "Bee Hive" appear much oftener than the words "Corn Syrup." We are getting accustomed to the use of the word "Honey" in advertising of all kinds of bakery products. Such advertising is welcomed because it indicates that honey is an ingredient of the bread or pastry. In this instance it is hard to find an excuse for connecting the bee hive with a product made from corn. It would appear to be an attempt to mislead the housewife into thinking she was buying honey, although the label shows that the product is syrup made from corn.

After all the conflict between the glucose manufacturers and the beekeepers, it requires a good deal of nerve for them to picture a beehive on the label of their product.

The Market Problem

The big problem just now is to establish a stable market for honey at some price. The poultryman inquires the market price for eggs. The beekeeper sets his own price and a dozen beemen may have a dozen prices. As long as this condition prevails there can be no stability in the industry.

The packers are interested in stable prices since they have no wish to risk their investment in the purchase of honey only to be undersold in the market. Once marketing agencies are established which will take the honey as offered, we can look for a tendency toward higher prices. With no established market, the beekeeper is faced with the temptation to cut his price in the hope of moving his product. As long as every beekeeper is a direct competitor of every other one in the market, ruinous prices are likely to continue.

Professor Montgomery, of Purdue, and Jay Smith examining the baby nuclei mating hives described in this article. (Photo by J. J. Davis.)

Getting the Queens Mated

By Jay Smith
Indiana

WE will now take up the question of mating hives. The question has been asked me many times, "What is the best size mating hive?" I have usually stated that the best size is the one that suits you best. Here is a general rule—the smaller the

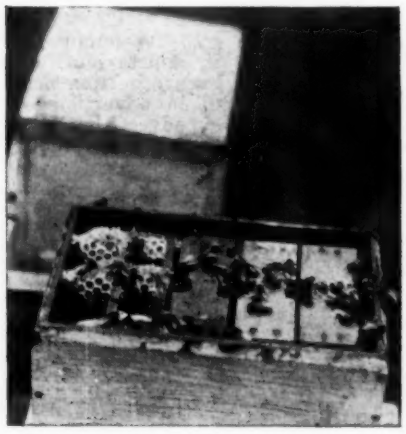
The peewee hive.

hive, the less expense in material, bees and feed, but the more skill and close attention it requires. As an experiment, not intended to be of any practical value, I made the little "peewee" hive shown. This holds one individual section and was stocked with fifteen bees and a queen-cell just hatching was given it. Four little cleats were nailed on top of the section forming a feeder. I fed this colony three times a day, and when the queen mated, I caught her and introduced her to a colony before she had time to lay.

Yes, you can mate queens with a hive as small as this, but it would take all your time to take care of three or four dozen. This was made merely to see how small a hive could be and yet mate a queen. A queen would not lay more than a dozen eggs in such a hive before lighting out to hunt more favorable quarters. In the matter of mating hives, the other extreme would be a full colony. This would require little more work or skill than putting in the cell, but to use a whole colony to mate a queen would be so expensive as to make queen rearing prohibitive in a commercial way.

Our Mating Hive

After years of experimenting in using mating hives of every size and description, I settled upon the one shown in the illustration, using three comb honey sections and a division board feeder the same size as a section. This has given such perfect satisfaction over a period of years, that I doubt very much if I shall ever use anything else. In the first place it is very flexible and can be used in



Too many bees.

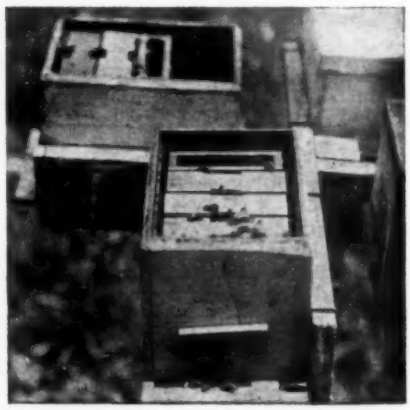
a number of ways using a very small number of bees, or a larger number, depending upon the number of queens wanted.

The cost in bees, feed and labor is not more than one third of that when the standard frame is used. One feature of the hive that may at first glance seem trivial, but in reality is very important, is that the frames run crosswise. This puts the feeder at the back of the hive where robbers cannot get to the feed without passing through the cluster of bees. As a consequence "it isn't done."

We experience no trouble from robbers. In fact, this last summer we fed honey most of the time with very little trouble from robbers. As a general rule, however, sugar syrup gives better satisfaction. I had intended when robbers were very bad, to fill the feeders with dry sugar and when feeding to pour in a little water. In this way no syrup would be dropped around to start robbing. I have never found this necessary.

To stock these little hives, bees are brought up from the outyard. About twenty pounds of bees are dumped in a hive and a frame of brood put in to hold them. This is done in the evening. As many packages are brought up as are needed for stocking the mating hives that are to be put out the next day. They are fed liberally over night. Next morning, the feeders to the mating hives are filled with thick syrup or honey. Two combs only are put in at first to make room for dumping in the bees. A ripe queen-cell is put in between the two combs. Half a pint of bees are now dipped in each.

For this purpose I like a square



Mating hives which were given ½ pint and ¼ pint of bees.

cup as it fits the corners in the hive, and we can scoop up most all the bees. For a time I used a pint of bees, but when the honey flow came on the bees built comb down into the feeder filled in the space back of it and built comb up against the cover. Again I found that a pint of bees did no better than half a pint, for a pint will die off just as quickly as half a pint. Again it takes more feed as well as being a waste of bees. The other two hives show two other systems of management. The hive showing three frames was given half a pint of bees. This we find most satisfactory. The hive with two combs was given one fourth pint of bees. This is a good system where one wishes to take out queens as fast as they begin to lay. One can take out a laying queen about every eight or ten days. It will be necessary to give them more bees as they get weak, for they are not strong enough to be self supporting. When it is desired to keep the queen laying for some time, as in case of testing them, I use a pint of bees, and put on a super as shown. This gives them seven combs.

As soon as the little hives are stocked with bees they are put into the basement where it is cool and left there two nights, and then hung on their standards the third night. When it is too dark for them to fly the entrances are opened. By this time the queens have emerged, the little colonies have accepted them, and the bees feel at home. In the morning the bees will fly out one at a time and there is no drifting. Next day a third comb or starter is given them and the feeder filled.

Why Bees Abscond

Do these little colonies abscond? No, not if they are fed three times per week. Ordinarily we feed twice per week, but when no nectar is coming in we feed a third time which keeps the bees perfectly contented. Feed is necessary to prevent them tearing down cells, and to keep them from absconding. Remember they will abscond with plenty of feed in the hive if they are not fed, but as long as feed is coming in they feel they have a pretty good thing and are contented. But if the feeding is stopped, they realize the jig is up, and out they go. We have run 800, months at a time, without one absconding.

When there is a good honey flow, feeding is discontinued. No cell protector or nursery cage is used. Bees never tear down cells when well fed. Bees do not know the difference between the cells they build, or those built by another colony, and will not tear down a strange cell any more than they would tear out worker brood because it was taken from another colony. In nature, bees build queen cells when they are well fed, and instinct tells them that when no feed is coming in to tear down queen cells. When bees get hungry, they will tear down the cells they have just built.

Little Hives Easy to Work With

These hives are hung on standards waist high and the labor of tending them is very small. We feed with a gallon measure, with funnel attached. Five gallon cans filled with syrup are set out in the yard at proper intervals so that a gallon will last till the next can is reached. One man can feed five hundred of these little hives in an hour. We do not carry a smoker, so it is not necessary to set the can of feed down. With the left hand the cover is lifted, and the syrup poured in with the right.

By keeping feed before them all the time, the virgins mature quickly and mate on an average, one day sooner than in a large hive that is not fed. I have noted this many times. Of course if a full colony were fed, the same as the small one, their queen would mate as early as the one in the small hive, but the cost for feed would be prohibitive.

The queen is allowed to lay for four or five days till she gets the combs well filled with brood, when she is removed. The next queen is taken out as soon as she begins to lay, for the brood from the former queen has not emerged and there is no room for this queen to lay. All subsequent queens are allowed to lay till the hive is well filled with brood. A few will have bad luck in losing their queens, so will have to be helped with brood from stronger ones. On the whole, they are self-supporting. If one has an extra demand for queens, he can take them out as fast as they begin to lay, and later put in more bees from full colonies. Feeding is done the day before putting in the cells.

Mating Hive Becoming Popular

I have had an unusual correspondence concerning this mating hive, and many beekeepers, both amateur and commercial, have adopted it and write me that it is giving perfect satisfaction. Once in a while some one writes and reminds me that in Queen Rearing Simplified, I ridicule the small mating hive, and now I recommend it and ask, "Why the change of heart?" My answer is that it is not so much the change of heart as it is a change of head.

One reason is that our present hive is much superior to the old one which made no provision for satisfactory feeding, but what is of more importance is that we have learned more about bee nature in all the years that have passed since the "Baby Nucleus" was tried and condemned by many of us. It is not so much the particular size or style of mating hive as it is the management. For those who have never used this hive and wish to do so, let me sum up the important features in its management.

Remember

Feed is the important factor in the management of this little mating hive.

Bees must be fed before putting into the hives.

Feeders must be filled before putting bees in.

You should feed the day before putting in the cells.

You should feed three times per week if little or no honey is coming in.

No matter if they have plenty of stores, they must be fed or they will abscond.

If taken from the home yard they must be shut in three nights and liberated after dark the night of the fourth.

If taken from the outyard one day less will suffice, but they must not be released sooner, or they will not return, but will gather in one big swarm. It takes time for them to learn that this little hive is their home.

Eugene Pratt used to say, "It takes bees, sugar and brains to manage these little hives."

In closing I might state, don't get the proportion of bees and sugar too large.

Marvin Studies Nectar Secretion of Tuliptree

G. E. Marvin, formerly in Wisconsin, now assistant at the Bureau of Entomology in Washington, under Mr. Hambleton, has made a study of the nectar flow of the tuliptree to determine the quantity of nectar secreted per blossom and the sugar content. The average weight of nectar secreted by one flower was 1.64 grams. The average sugar content of nectar from freshly opened blossoms was 16.7 per cent. After the flower was open the concentration of the nectar increased until the second day it reached 35.9 per cent. The tree under observation was calculated to yield enough nectar to produce 2.16 pounds of honey.

Marvin observes that to one standing near a tuliptree at the height of the blooming period with a gentle breeze stirring the branches, the falling drops of nectar give the impression of a light rain. During favorable seasons nectar in tuliptree blossoms is so great that wild insects and honeybees cannot carry it away as fast as it is secreted.

Nectar was found in the flower during the first day it was open and the following morning. If this nectar was removed, the blossom remained practically dry from that time on. Nectar was also found to be present in unfolding buds.

Cut Comb Honey Facts

By J. E. Hilbert
Michigan

SINCE quite a number of beekeepers are preparing to produce some cut comb honey this year, we wish to pass on to them information which will help. The splendid article in the January issue by Carl Rhapstock should be given a second reading. While cut comb honey is produced with any hive, we, like Mr. Rhapstock, prefer the Modified Dadant hive because of the 1½ inch spacing of frames and because queen excluders are not needed. The Modified Dadant hive has been used in our yards for fifteen years, and for thirteen years we have produced cut comb honey entirely.

Whatever hive is used, 1½ inch spacing should be employed to get combs of the right thickness. 1⅜ inch spacing is too lean and won't weigh up. Some beekeepers space 9 frames by guess in a 10-frame hive which is all right if it is done carefully, but generally turns out some combs too thick and some too thin. For that reason it is best to have correct spacing in the first place.

The 5⅜ inch frames will probably be the ones most generally used, spaced 1½ inch, with top bars ½ inch thick; or the 6¼ inch frames with thick top bars. The latter will give a little more trim for the melter but this extra trim allows you to cut the combs, even if the corners are not completely filled out.

The top bars should have a slot in them in which to fasten the foundation, and the foundation should be well fastened in with beeswax and the sheet extend down within ½ inch of bottom bar.

Slotted bottom bars are not desirable, as the foundation, when fastened in the slot, will generally warp. Use 16½ inch foundation so as to keep away from the end bars. Otherwise, if it fits too tightly, the combs will be wavy. Foundation made of absolutely pure beeswax should be used as the bees accept it quicker. There will be no trouble in melting down. Foundation put in shortly before using will be accepted more quickly and give straighter combs.

In placing on the supers, it is best to use a leader of drawn combs, putting on the first full foundation super when the super with the leaders is partly filled, repeating with foundation supers as often as they are needed. We always raise full supers and place the empty ones under. Toward the last of the honeyflow, crowd a little so all the combs will be filled.

Combs partly filled with honey should be carefully extracted and used for leaders the next season. If not travel stained from being left on too long they can be used for the finished product. In this way, you can get early honey which almost always brings a good price.

Frames from which honey has been cut, should be trimmed out before placing them back in the super. The first frames from which the honey is cut can be used at once by boiling them in a kettle or tank to remove the wax from the slots and at the same time clean up the frames so that the spreading of disease is prevented.

Frames without any slots in the top bars may be used if you have a handy and sure way to fasten in your foundation. They also will clean up more quickly.

Cut comb honey supers should be removed and the honey packed as fast as the sales can be made. If the bees outwork you, do not leave the combs on too long, or travel stain will spoil the looks of the honey.

Combs taken from the bees are in excellent condition to cut right away and pack, but after the honey stands a day or two, it cools and then it may be necessary to get it warmed up which takes several hours before any packing can be done.

In packing honey, two methods of drainage can be used, natural drainage and machine drying. If natural drainage is used, a room of 90 degree temperature will be needed, unless you use a cabinet to drain in where the heat can be controlled. The combs will need to be warm before they cut smoothly.

For machine drying, 80 degrees will do by using the top three or four supers, then keep stacking up the bottom ones as you cut. A machine will put cut combs in better shape in three minutes than twenty-four hours of actual drainage. If you use natural drainage as Mr. Rhapstock said, you will need a motto over your work bench "DRAIN WELL," but with a machine your draining troubles are over.

Cut comb honey is now at a stage where in experienced hands, it is no longer guess work, and the handy beekeeper can easily produce and pack it. Beekeepers who are unhandy or messy in their habits will not produce a good article. Crude outfits for this kind of honey are not good. You need more than a butcher knife and a screen. You need a knife that makes as many cuts as you wish cakes from a comb so every cake will be just alike with smooth edges. Well cut cakes are easy to wrap and to pack in trays or cartons designed for them.

Only moisture-proof cellophane should be used to wrap comb honey, because it quickly and easily unwraps while the plain cellophane hangs on and tears when unwrapping, spoiling the looks of the cake of honey.

The first comb honey taken off and packed, if well drained, will generally be the last to sugar. We have kept this honey all winter without sugaring. However, some honey sugars quicker. Combs stored in a warm room will sugar quicker when disturbed in the winter, but it is a handy method, and sales should be made as packed so as to keep a fresh supply. A neat pack well displayed is half the sale, and good sales are all your profits.

Hamilton & Company New Los Angeles Firm

Hamilton & Company is the name of a new company at 108 West Sixth Street, Los Angeles, California, dealers in honey and beeswax. This firm has incorporated the California Honey Company and both of the above are owned solely by Hamilton & Company.

Roth Hamilton was for many years the head of Hamilton and Menderson and later the President of Hamilton, Wallace & Bryant. He is also head of the new firm with his son G. B. Hamilton.

The new company will specialize in beans, honey and canned goods.

A Barrel of Apples

"One bad apple can spoil the barrel," says an old proverb. A case of tuberculosis may, from the public health viewpoint, be like that bad apple—the disease tends to spread from him who has it to those with whom he lives.

But the spread of this disease can be prevented by examining every person who has been in close contact with a case. With the aid of the tuberculin test and the X-ray it is now possible to discover if a person is infected, and how much damage, if any, has been done. Much can be done to prevent the development of actual disease.

One difficulty is that tuberculosis usually develops slowly. Months or years may pass before the symptoms become troublesome enough to drive the patient to the doctor and in the meantime, others may have become infected. People need to be reminded that "that tired feeling," or the "cough that hangs on," or certain other symtoms may be due to tuberculosis.

The National Tuberculosis Association and its 2084 affiliated associations in the United States conduct

each year an "Early Diagnosis Campaign" to focus attention on a single phase of tuberculosis which kills more persons between the ages of 15 and 45 than any other disease.

This year the campaign begins on April 1 and will ask the public "From Whom Did He Get It—To Whom Did He Give It?" "Examine and Protect Every Contact."

In numerous ways persons will be helped to find out if they have the disease, to secure treatment and learn to protect others. Emphasis will be laid on the danger to children and the necessity of examining them with the tuberculin test and the X-ray. Because of the economic stress, it is all the more necessary to build up our defenses against this enemy that strikes when resistance is low.

Readers of this magazine are urged to give serious thought to the advice given during this campaign and to consult the family doctor promptly where such a step is indicated.

To Get Seed of Alpha Clover

So much interest has been aroused over the new Alpha Clover reported from Saskatchewan, that we refer readers to three sources of seed supply as follows:

A. Wm. Bowman, Leross, Saskatchewan.

University of Saskatchewan, Saskatoon, Saskatchewan.

Clement Dahlheimer, Anoka, Minnesota, Route 1, Box 221.

Mr. Dahlheimer's seed was secured from the University and has been grown in this country. Mr. Bowman has been supplying seed to some of our readers at 25 cents per ounce. We are not certain about being able to obtain seed from the University but it might be that it could be had from that source.

Annual Mother's Day Campaign

Plans are completed for the third annual Mother's Day Compaign sponsored by the Maternity Center Association, New York City. The object is to save the lives of women who now die needlessly from maternity causes. According to Mrs. John Sloane, President of the Association, the observance this year, which falls on May 14th, will be marked throughout the country by medical societies, women's clubs and welfare organizations who will call the attention of the public to the needs of their communities for improved maternity care.

Material for local campaigns will be provided free to clubs and organizations wishing to make use of Mother's Day for this purpose. Address the Maternity Center Association, 1 East 57th Street, New York.

Spring Increase in the South

By A. R. Graham
Texas

Any beekeeper equipped for the shipment of package bees can easily make spring increase by the use of the following method:

Select a site somewhere near home for convenience, but not closer than a mile to any apiary of strong colonies. Put on this site six strong colonies of choice breeding stock which is to be broken up later and used in preparing a giant cell building colony.

When the right weather conditions prevail visit some outyards and cage forty or forty-five pounds of bees to be carried to the site previously established and on which the six strong colonies of choice stock are already sitting. Take from the six colonies enough frames of open brood to fill six supers being careful to avoid the entrance of any queen into this cell builder being thus made up. Stack the six supers on a bottom board and release the caged bees thereon after they have been thoroughly sprinkled down with lukewarm, very thin sugar syrup. Take what remains of the six colonies away at once or the queenless bees will begin to drift to them. For best results arrangements should be so timed as to liberate the caged bees just before nightfall.

To feed this six story cell building colony remove the cover and spray with sugar syrup made up of two parts water to one of sugar by measurement. Continue to spray until the syrup begins to drip on the bottom board, then wait a bit and repeat. Do this several times until the bees become thoroughly filled. All feeding by spraying should be done just before nightfall. If there is a honeyflow the feeding need not be so heavy after three or four days as the bees will become organized and begin to bring in supplies from the field. With favorable weather conditions and proper feeding and handling this cell builder will often finish 150 or 200 cells.

After the expiration of nine or ten days break up the cell builder into as many nuclei as best suits the needs of each individual beekeeper. Ordinarily, where increase is the objective fifteen would be about the right number. But where more than fifteen or twenty are wanted on a single location two or more cell builders can be started. Set the nuclei at random so the young queens can more easily find the right entrance after their mating flight, and in order to prevent swarming be sure there is only one cell left in each nucleus. It may be found necessary to re-distribute the bees from those that have become too strong (caused by drifting) to the weaker ones. This may not be necessary but one evening, altho they sometimes drift to a limited extent on the second day. Conditions being favorable these young swarms should build up in time to produce a super of surplus honey the first season. As these swarms build up they can be shifted off to outyards to fill in the empty spaces caused by winter loss or carried to permanent locations where new apiaries are desired. This can most often be done without any extra trips. Just handle a few each day while carrying on the regular routine of work.

The most interesting feature of this method of increase lies in the fact that the beekeeper gets his bees from that sprinkle of colonies that are preparing to swarm early and in most cases would be a total loss if not used in some way.

Transferring Bees to Modified Hives

By Bro. Alphonse Veith,
Indiana.

Owing to the heavy fruit crop of 1931, there was little fruit bloom in 1932 and, since the weather was cool and unsettled, I had to wait with transferring until the Tulip Poplar trees were in bloom, about the 5th of May. Then I proceeded as follows:

The queen of the colony, with only one frame of brood and bees, was put down into a Modified Dadant hive body with an additional pound or more of bees shaken into the hive with them. An excluder was put on top of the Modified Dadant hive and my 8-frame hive bodies put on top of the excluder.

Queen cells were started in the 8-frame hives above and I destroyed all of them at the proper time. Not all the transferred hives had queen cells, however. Some of them did not have any.

When the queen cells were destroyed, I found the bees were reluctant to build combs below the excluder so I shook the greater number of bees from above into the lower hive body and as soon as all the brood above the excluder had emerged, I removed the combs and used them for extracting combs later. I am perfectly satisfied with the entire job.

I had no swarms from these large hives. Each colony is headed by a Carniolan queen and did not swarm even though they are boiling over with bees and the Modified hives which they occupy have three supers. From one colony with a queen introduced from Mississippi in 1929, I extracted 7 gallons of honey.

Stepp's hive on top the log.

A New Way to Transfer Bees

By W. E. Stepp
Kansas

I enclose a picture of a bunch of bees which I took from a log in the winter. I note a question in the Journal from a man asking when to transfer bees from a tree. I like to do this before brood raising starts when the bees are low in stores.

On January 1, 1931, with the temperature 19 degrees in the morning and 35 degrees at 3 o'clock in the afternoon, I took this log of bees to the basement of my house with a temperature of about 55 degrees, about 11 o'clock and placed a false hive bottom over the top with a hole in it to fit the log, and placed a slide over the hole to keep the bees in until I was ready to transfer them. There was also a place close under the top covered with screen wire to give air. This space was closed with a cloth when I was ready for the drive.

After bees got active, I put them closer to the furnace in the furnace room, and by 8 o'clock in the evening (that night) all was ready, as you can see by the picture which I took when the job was done.

At 9 o'clock the temperature was 80 degrees and I set my hive on top with four full combs of honey, and four fully drawn, empty combs with a screen wire inner cover on the hive. I placed a 60 watt electric light 18 inches above the hive, pulled open the slide from the log, beat the log with plenty of jolts, then applied the smoke at the bottom hole which I had kept corked up before.

After a few minutes I opened the upper hole and applied smoke, drumming all the time. I had no light except the one above the hive. A prettier job of removing the bees I never saw. You cannot see a bee on the outside in that picture. Everything was bee tight and how they went for that light!

An hour later, I set them back on a regular bottom board in a dark room until morning, then I put them in my 40 to 45 degree room in the basement where I had other weak colonies, and left them there until about the 15th of February when I set all of them out for a flight for three warm days, then put them back until late in March when I took them to an outyard and the colony from that bee tree beat anything else in the yard of 20 stands that summer.

Now when it is so I can, I intend to do all my transferring in this basement at night, using the electric light above. A few drums on the old box or the hive and a little smoke and up they go like a gang of scared wolves. I always try to have fully drawn combs in the hive to transfer to, and one or more with honey in. This week I have three colonies to transfer for a man with combs built crosswise and every way. I will place an excluder between the old hive and the new one, just as soon as I know that I have the queen above. I will leave them for 18 days. I'll place a can of feed on top to make sure the bees will stay up in the upper hive and work there.

I can transfer bees almost any day or night in the year this way. I did not have a dozen bees left in the log in the picture, the following morning when I looked at it, and they only had about a half pound of honey between them and starvation. I knew they did not have any by the weight of the log which was only just a shell.

I have transferred bees every way I have ever heard of, but this beats all the old methods for the bees just rush out to get to the only light they see, and when all is done, the job of taking care of the old box or old hive is easy. Just cut out the combs and fit them in the brood frames, if you wish, which I often do where there is brood in the supers. Of course, in the winter, there is no brood or bees.

Oilcloth for Book Covers

When detailing a blue and white color scheme for my kitchen, I covered my various cook books with a dainty patterned oilcloth. Thus the color scheme was followed and the books rendered sanitary, as it is an easy matter to wash them. L. K. W.

Breeding the Honeybee Under Controlled Conditions

An Abstract of U. S. Department of Agriculture, Technical Bulletin No. 326—W. J. Nolan.

Breeding honeybees under controlled conditions requires that insemination of the queenbee be accomplished either by natural or by artificial means. The only feasible method thus far suggested by which to employ natural insemination is the use of isolated mating stations, but this method is unsatisfactory because (1) of the lack of certainty of perfect isolation, and (2) because of inability to choose the specific drone to be used.

Absolute freedom to choose both the queen and the drone requires the use of some method of artificial insemination. All attempts at artificial insemination fall under one or the other of two main heads, (1) placing the drone organ in proper position in the vestibule of the queen to effect insemination, and (2) removing the sperm entirely from the drone and injecting it with instruments into the oviduct of the queen. Thus far only the last or Watson method has been repeatedly used with success by others.

The year 1932 completes the sixth consecutive year in which Mr. Nolan, apiculturist in the Bee Culture Laboratory of the Bureau of Entomology at Somerset, Md., has successfully bred bees by the Watson method. Although four generations of bees is the largest number yet obtained by him in one season, Mr. Nolan declares that under optimum conditions a generation a month should be possible during the season when bees are active.

To Mr. Nolan belongs the distinction of being the first experimenter to verify the Watson method, and a few months later followed A. S. Michailoff of Russia, H. B. Disbrowe of Canada, and G. H. Cale of Illinois.

The original Watson technique has been considerably, though not essentially, modified by new instruments and ways of manipulating them. Spermatozoa have been found to remain alive under a cover glass or in a dead queen for several hours at summer temperature.

Queens have been successfully inseminated with a mixture of sperm from several drones, and Watson has repeatedly performed the feat of inseminating one queen with sperm taken from the spermatheca of another queen which was naturally mated on the wing the year before.

Successful inseminations have been made upon queens 29 days old, and in 1930 and 1931 better success was

had with queens 17 days old or older than with younger queens. Successive treatments of a queen, at least before she begins laying, have been found to incease the amount of her insemination.

Plans have been worked out by which the rearing and testing of queens to be used in breeding work may be accomplished with a reduced number of bees and equipment.

It should be but a short time now until some of the results in breeding presaged by Dr. Watson in his present articles, (Feb., March and April) come to be actual and not latent. Let the good work go on. There are a number of quiet workers who, with Mr. Nolan, may soon have some fine results to report.

To Be Rid of Laying Workers

By E. S. Miller
Indiana

In the treatment of laying worker colonies I must disagree with some of the advice recently given in the American Bee Journal. We are told to shake the bees off in the grass some distance away and to place in the center of the brood nest, presumably on the old stand, a caged queen between two frames of emerging brood from another colony. This is the same treatment recommended many years ago, and it sometimes proves successful. But the bees of a laying worker colony are old bees, hostile to a new queen and practically worthless in maintaining colony strength. Why try to save them? If the laying worker colony is strong, it is more than likely that the old bees returning will kill the queen unless there are a large number of young bees to protect her. This old mode of treatment is based on the assumption that the individual laying workers would kill the queen, which assumption probably is not true.

However, there is a much better and simpler way of disposing of a laying worker colony, and that is by uniting it with a strong queenright colony, using a sheet of newspaper between the two to prevent fighting. For the benefit of the inexperienced beekeeper, I would say remove the cover from the queenright colony and place over the hive a sheet of newspaper. Next, remove the bottom board from the laying worker colony and set it on the top of the queenright hive. The paper will be eaten away in a short time and the two colonies will become one. This seldom or never fails, and if the old bees of the laying worker hive have any value at all they may be of some use as workers in their new location.

It must be remembered that queen introduction is hazardous where old bees predominate and it seldom pays to try to requeen a colony after all worker brood is emerged. Ordinary queen introduction may be made safer by using some device for getting rid of the old bees, as, for instance, moving the hive to a new location. This may be done when there are other nearby hives for the flying bees to enter.

Honey Sweetened Whole Wheat Flakes

The Tennessee Cereal Company at Nashville has begun operation in the manufacture of Ernst Whole Wheat Flakes. This is a tasty product, rapidly finding its way to tables and it is hoped to secure national distribution. B. Walter Ernst is the inspiration behind the new venture. The cereal plant, a picture of which we show here has a capacity of about 2200 packages per day. The flakes are made of pure whole wheat, steam cooked, flavored with pure honey, rolled, dried, and toasted to a golden brown crisp. Eighteen tons of honey were used in the initial orders for this new product.

Mr. Ernst has a splendid knowledge of the breakfast food business in which he has been working since he was a boy. For the last six years, he has been experimenting and preparing for this venture.

The new cereal plant is of steel and concrete design of the most modern and approved type and is located on the Franklin Pike and Tennessee Central Railroad just outside of Nashville City. Mr. Ernst claims to have the most modern and sanitary cereal plant in the country and the only one of its kind operating in the South.

B. Walter Ernst

An analysis of the flakes by food experts shows that the nutritious and energy producing honey, with rich jersey cream, make an ideal, palatable and well balanced food.

We wish you pleasant sailing, Mr. Ernst.

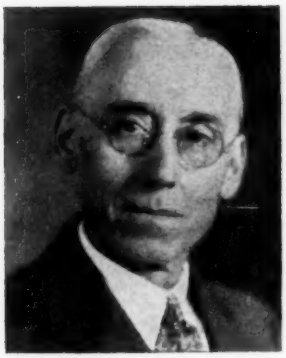
A splendid plant for honey whole wheat flakes.

What Is the Grade of Baking Honey?

I thought bakers usually used the darker grades of honey, but according to your editorial in February on page 46, at least one eastern baker has enquired about a carload of white honey for use in the making of bread. Now what is a baking grade of honey?

Geo. Harrison,
Virginia.

[Well, what is a baking grade of honey? It is our notion that more and more bakers are turning to the use of the more delicately flavored honey, regardless of color. The stronger honeys do not work so well in bread. The darker honeys do fairly well in such baking goods as cookies, but for bread making it requires a delicately flavored honey, whose flavor will ultimately add to the richness and appeal of the bread and not be an objection.—Ed.]



The Challenge of the New Bee

By Dr. Lloyd R. Watson
New York

Dr. Watson gives us some notion of what to hope for in the "new bee." And he suggests that, to get all these good points together in one true-breeding insect, will take the combined efforts of quite a few interested people, all earnestly working on some phase which will contribute to that desirable end.

THE keeping of bees has ever been an expression of the craving of man for physical betterment and for higher standards of living.

Beekeeping was a simple occupation under primitive conditions when there was no particular specialization. The principal care of the keeper was then to supply empty hives during the early season, catch absconding swarms during the mid-season and "rob the bees" at the end of the season. Under the highly specialized practices of modern times, especially in large scale production, beekeeping has become an extremely complex operation requiring a high degree of organization, business management and operative skill.

Knowledge and experience in beekeeping are not restricted to any land or race of people. Any civilized country where men may live and till the soil has something to contribute to the fund of human knowledge either in bee races, or methods, or experience. Practices are bound to vary from country to country, and from one part of a country to another part of the same in accordance with the requirements of soil, climate, flora and the like, but the underlying principles of bee nature remain the same.

One is forced to remark how that around a savage and undomesticated insect has grown an occupation which claims part or all of the attention of nearly a million followers in the United States alone, and is capitalized in this country, we are told, at approximately 40 millions of dollars. If an industry of this proportion and antiquity is warranted by the individuality of "the old bee," what limits, let us ask, shall be set for the proportions, the dignity, the guarantee of the coming industry warranted by the personality of "the new bee?"

The new bee addresses a peculiar appeal to the imagination of biological investigators young or old who possess a taste for pioneering—the hardihood and the courage to blaze new trails. The character of the multitudinous problems involved in the evolution of new strains of bees clearly points out three prerequisites which investigators in this field should possess in round measure — (1) a practical working knowledge of bee-behavior, (2) a secure footing in the science of genetics, and (3) the research habit of mental attack. No amount of eagerness for quick results can take the place of a thoro appreciation of the fundamentals involved. Great changes do not as a rule come quickly. Nature has to be reckoned with, and Nature demands time. Experience teaches that great successes have frequently been founded upon failures, and that great difficulties may point the way to great discoveries. Sometimes great scientific enterprises are attended with great risk of time, if not indeed, as sometimes happens, with risk also of personal fame and career in other attractive fields of endeavor, but quiet persistence seasoned always with intelligent faith and optimism can and does accomplish wonders.

The recent past has seen heroic efforts to elevate the profession of beekeeping to a position of scientific equality with that of other agricultural pursuits, chiefly, as has been already pointed out, by attention to matters of environmental adjustments. Now comes a new call for workers of highly trained skill and vision to make another attack upon the same old time-worn problem, in this instance, however, from an entirely different sector, vis., from that of the heredity of the bee itself.

This new call comes not from ready established and endowed laboratories pursuing definite research projects in bee-breeding, and able to pay well for services rendered—no, not yet. The call will scarcely be heard by those who are born and trained to work solely for pay. It may be heard, and is being heard, by a few who have been born and trained to the hardihood of breaking new paths, who have the willingness to undertake hardships if necessary, who thirst to discover new truths; who, salaried or unsalaried, will not abandon the problem even tho, like the spider, they are compelled to provide for themselves both the workmanship and the materials.

The economic and social possibilities of this problem constitute a responsibility in connection with instruction and investigation which cannot be profitably overlooked by governments of civilized and progressive countries. It is a satisfaction to know that when the history of beekeeping for the second quarter of the twentieth century is finished it will be manifest that our own Government thru its Department of Agriculture won the distinction of being a pioneer in the science of honeybee eugenics. The same distinction will also be accorded to the Soviet Socialistic Government of far away Russia. Colleges and experiment stations associated with agriculture will more and more find the breeding of improved types of bees a pursuit equally important to themselves and to their supporters.

The call of the new bee is already gripping the imagination of a few young biologists who are casting about themselves for a career. They are anxious to leave the dead-wood center and move out onto the living fringe of the field where growth takes place. But again let the warning be sounded that initial enthusiasm for quick results must not be confused with achievement. The test by which all volunteers for work in this field will be tried and which will determine who shall continue up the steep grade to final achievement and who shall turn aside to less difficult paths can be foretold by those who have experienced the uncertainties of border life.

Who has the quality of adventure? Who has the vision and the persistence to break new trails? Who thirsts to see the regions that lie beyond, and which are worthy of the devotion of a lifetime—to taste the joys of discovery? Can you love on if your love is not at first returned? The practical realist sees only what can be seen, and does only what can be done. Looking from wistful windows will never coax from Nature the keys that will open Her lockers of truth. He who would walk the

highway of eventual achievement must acquire somehow that indescribable something which amounts almost to a religious ardor which will enable him to see what cannot be seen and to do what cannot be done.

This is no job for the indolent, nor for him who, altho possessing some eagerness for the practical, has no grasp of the fundamentals. The scientist is disciplined to make reasonable predictions and then it becomes his sacred duty to transform his predictions into fact. Thus the camping ground of the pioneer of today becomes the homestead of the common folk of tomorrow. It is strongly to be urged, therefore, that no one enter this field of endeavor motivated solely by a longing for institutional aggrandizement or for personal advantage, but rather let those who enter do so for the more worthy purpose of adding if possible some trifle to the total of scientific knowledge, and of contributing something of lasting value to the sheer cause of human betterment.

With these considerations in mind what more enduring satisfaction could come to men and women on the threshold of actual living than to be associated with the creation of such a potential human benefaction—what better treasure could one lay up for the future! But if the expert veteran of bees, and of heredity, and of microtechnique has even passed the meridian of life, and still craves to give expression to his creative faculties, what similar type of exploration can so effectively combat the atrophying influences of advancing age? It is characteristic of advancing age to possess a maturity of judgment and a correctness of interpretation which is envied by years of less experience. The power to generalize and the capacity to apply the organized knowledge which we call science, together with a certain sense of proportionate values constitute the flower of maturity which is the height of every rational ambition.

The lure, the promise and the romance of the new bee will naturally have a strong appeal to the mind of the ordinary beekeeper, and well they may for it is he who will be the principal gainer in this enterprise. By far the heavier portion of the task of developing the new bee will fall upon the shoulders of highly trained research workers in institutional and endowed laboratories, but a distinct and unescapable responsibility also settles upon the shoulders of the ordinary beekeeper in hastening the new day. The common hard working intelligent men and women who make their living with their heads and their muscles, those who take the stings and the reverses, who smell of smoke and propolis—these common fine folks must first receive the vision of "the new bee." With faith and imagination they must bridge the expanse of a few years hence and see the really domesticated, man-made bee flying forth from and returning to their hives—they must picture themselves performing the routine work of the apiary without need of veils or smokers, their children will play among the open hives without fear and without harm. With the mind's eye they must see large beautiful bees, their bees, hovering over red clover bloom, and returning home with copious draughts of hitherto forbidden delicacy.

The common beekeeper must be awakened to the immense possibility which lies before. The fact, the lure, the challenge of it must take possession of his imagination so that he will think about it and ponder it. He will talk about it to his fellows along the road, and over the open hive. The idea will catch fire among beekeepers who will ask that space be reserved for its discussion in the programs of their association and convention gatherings.

The season is ripe for action. We have the equipment with which to produce results. Surely the time has come when forward looking beekeepers everywhere should demand that part of their tax money be spent for the improvement of the organism with which they work and upon which they depend for their livelihood. When this kind of enthusiasm among beekeepers is lighted it will not be long till work is started in many different laboratories to produce better bees. The organization and agreement necessary to present these demands to the leaders of research laboratories and directors of experiment stations everywhere can be acquired only as the need permeates first the individual beekeeper's mind and then spreads on to ascending organization.

Apiculturally our age will ultimately be measured by the labors of those who can see beyond the mass. The need for gentle, powerful leadership of vision has never been greater than it is now. There is nothing to lose and there is everything to be gained by vigorous, undelayed pursuit. Our most precious asset, time, is ever on the wing, and tomorrow, today will be yesterday.

Recipe for Youth, Beauty and Life

A Honey Broadcast

By Oliver Hickel
Missouri

Youth, beauty and life will always be found in these recipes which I, the Honey Man, will give you every week. Today, I have an extremely interesting, appetizing and beneficial recipe which contains many of the vitamins so necessary to maintain health and happiness, for you know a healthy person is always a happy one.

This recipe is called the RESURRECTIVE COCKTAIL and is to be taken before each meal as an appetizer. It is simple to prepare. Get your pencil and paper ready. I will leave it to you to look up, for yourself, the food value of each of the ingredients that go into this recipe. Then your common sense will tell you how valuable it is.

First, the juice of one orange; the yolk of one egg (save the white of the egg for your angel cake); one cupful of milk; and a cake of yeast. Blend these all together and add two teaspoonsful of honey; beat together and enjoy a taste of real Paradise.

The Honey Man will try to be sweet to you during all his broadcasts, so be sure to tune in next Wednesday and get more delicious tasty recipes to create health and happiness. KMOX

The Uses of Honey

The publisher and editor of La Gazette Apicole, monthly published at Montfavet, Vaucluse, France, Mr. Geo. Alphandery, wishes an answer to the question: What may be produced by the use of honey? He is not seeking merely recipes of edibles made in part with honey, but to ascertain how honey may be used in industry, in medicine, in toilet preparations, etc. In fact he wishes to hear from all beekeepers with such suggestions as they may choose to make in old ways or in new ways.

We will be glad to have our readers join in this discussion of honey and its possible uses.

Report Close Relation of Carotin to Vitamin A

Thomas Moore, in the Biochemical Journal, reports that when carotin in the form of carrots is fed to cows at the end of the winter stall-feeding period, the butter fat obtained is unusually rich in both carotin and vitamin A. Place along with this the report of A. Polak and J. H. Stokvis, in Holland, that rats, fed on diets without vitamin A, were prevented from contracting xerophthalmia or were cured from it by the daily giving of a small amount of carotin by mouth.

You will remember that Dr. Schuette in Wisconsin, found that some honeys contained carotin. This was reported in our pages. If there is a close relation between carotin and vitamin A, can it be possible that this important vitamin may after all be present in certain amounts in honey? Usual studies of the vitamin content of honey have been negative.

Golden Blossom Revue

Harold Levey, conductor; Fred Hufsmith, tenor; James Wallington, announcer and June Pursell, blues singer.

The Golden Blossom Revue—a program of lively music and haunting melodies featuring a cast of vaudeville, radio and stage headliners—made its debut to listeners in the New York Metropolitan area through NBC-WJZ facilities on New Year's Day.

June Pursell, Fred Hufsmith and Harold Levey are heard at the half-hour broadcasts, reaching listeners each Sunday at 1.30 p. m., E. S. T., under the sponsorship of the J. G. Paton Company.

Levey, well known orchestra conductor and composer of many Broadway musical shows, directs the music and supplies a background for the blues songs of Miss Pursell and the tenor solos of Hufsmith. A protege of Victor Herbert, Levey has conducted for the famous composer and has written much music himself. He was the author of "The Magic Ring" and "Lady Billie" for the musical comedy star, Mitzi, and wrote for several editions of "The Greenwich Village Follies." More recently he entered the moving picture field, where for four and a half years he acted as general musical director for Warner Brothers.

Miss Pursell, who was voted the most popular radio artist on the Pacific Coast, sang with Abe Lyman's orchestra, and later was featured in vaudeville as "The Haunting Blues Singer." Moving pictures followed, and after making several shorts and singing one of the leading roles in "Viennese Nights," Miss Pursell came to New York where she has been presented in many programs over NBC networks.

Hufsmith also has sung on numerous radio programs and is well known to NBC audiences. He began his career in Florida when he sang in the first opera ever presented in that state, and later returned to sing as guest soloist with the Florida Symphony.

This entire revue is part of the advertising program for Golden Blossom Honey distributed by the John G. Paton Co., of New York City, under the direction of R. B. Willson.

The Granulation of Honey

By C. P. Dadant

Honey granulates or candies wherever bees are kept. Yet, very little is said about it anywhere. This is one of the great faults of honey producers, for many consumers distrust honey which has "turned to sugar" as some housekeepers call it.

When we began to keep bees, we discovered almost at once that the honey, when extracted from the combs, would soon harden changing from this syrupy liquid consistency, to a soft granulation imitating the consistency of butter, or to a more or less coarse hardening into grains of irregular firmness. Clover honey, when thoroughly ripened, often makes a pasty sweet of fine consistency and flavor. The darker honeys are more apt to granulate in hard, coarse lumps. But all the granulated or candied honey is delicious, if one does not eat it with a prejudice. The only unsatisfactory honey is that which is not sufficiently ripe, for it separates into two layers and a very watery portion remains at the top.

We have had honey to granulate within 24 hours, when handled at the time of granulation, in cool weather, in September or October.

Why do people object to granulated honey? Because they mistrust it. Because they think it is mixed with sugar syrup. Yet, any one who has handled sugar syrup knows that it does not granulate in the way of honey, but crystallizes into a hard mass.

Since honey always, or nearly always granulates, we should get the consumers accustomed to this. When we first began to put extracted honey on the market we advertised the fact, on our labels, that our honey would harden, granulate or candy, in cold weather. Why our people have ceased doing this, I do not know, but it is an excellent way to get the consumers accustomed to the idea of honey granulation.

My attention was lately called to the fact that honey granulates in every country. The February number of "Le Rucher Belge" (The Belgian Apiary) contains a very interesting statement on honey granulation. Another article in the same number contains a discussion between a dealer and a consumer, the consumer holding to the idea that honey which is candied or granulated is not pure, while the dealer explains to him that all honey, or nearly all honey, will harden in cold weather. We need more of this kind of argument to convince the consumer, as he should be convinced, that the best honey granulates in cold weather and that granulated honey is always pure.

Of course, for the granulation of honey it is necessary that it should be exposed to air, for comb honey, sealed over, does not often granulate. But just as soon as you expose it to air and to cold, the comb honey will granulate; this is true of all kinds of honey, with very few exceptions.

Now to return honey to the liquid state: Heat it gently, over water (au bain-marie) until it is liquid. Some people prefer to pass it over a hot spot, that it may melt more promptly, as honey darkens when kept hot a long time. There is little difficulty in liquefying honey, if we are careful and do not overheat it.

Honey Doughnuts

½ cup sugar 2 eggs.
½ cup honey 1 cup sour milk
1 teaspoon soda
½ teaspoon salt
1 teaspoon cream of tartar
2 tablespoons butter
½ teaspoon ginger
½ teaspoon cinnamon
Flour to make soft dough

Mix as soft as can be handled. Fry in deep fat.

C. J. Oldenburg, Minnesota.

Do They Bite a Little, Too, Mr. Carr?

By N. T. Spangler
Utah

On page 60 of the February issue I see that Mr. Carr has simply renewed an old method of transferring, whether it is from a foul colony or a gum. A method that I have used for years in my county inspection work. It is the only safe way when you are treating foulbrood or have bought up an old gum.

Mr. Carr has surely made a bold statement when he says that Caucasians are vicious stingers. Is it not possible that they bite a little also? I am of the opinion that he has either a grudge against the Caucasians, or that he has hybrids sprinkled with Caucasians which are anything but gentle. Whenever a beekeeper asks for information from a world of beekeepers as to the most gentle race of bees the answer is invariably Caucasian.

He further states that they build burr combs between the frames. That reminds me of some carpenters who live in poorly constructed houses. A carpenter who would not fix his doors and windows, or even his chicken coop, etc., against the wintry blasts is not much to brag about. We all agree to that. Then you will turn right around and condemn a fine race of bees that have pep enough to prepare their winter nest from the cold blasts of winter, and not leave it to the possibility of their master doing it for them. I will confess that half the beekeepers do not provide any protective measures for their bees.

I have had several years' experience in breeding and raising Caucasian bees, so I am inclined to think that Mr. Carr has had insufficient experience in handling genuine Caucasian bees. If he had, I am sure he would not have challenged the world by such a statement. The only thing that condemns them with some beekeepers is their masonry, and with me their many good points as honey gatherers early and late working through cold and cloudy weather, and their wonderful vitality to withstand the winters in the high altitudes of the western mountains will offset any masonry done about the hive more than 4 to 1. I could write much good about these bees. I have a splendid queen rearing yard of my own and I specialize in raising both Caucasian and Carniolan queens and bees for honey gathering for ourselves. The bee business has been my hobby for forty three years from Michigan to Alabama, and now possibly my last stand in Utah. We specialize in the production of extracted honey.

["Masonry"—that is a good word to use to describe their protective instincts and its results. We can surely testify to the fall from grace which their masses of burr comb and propolis induces in the hurrying beekeeper.

But, there is much difference among them. The bees from the same queen stock, right in your own yards, show a decided variation in the tendency to build their defenses. Why is this?—Ed.]

Apples in Honey to Serve With Ham

1 cup honey
¼ cup water
¼ cup vinegar
½ teaspoon cinnamon

Core apples, cut in quarters, leaving skins on. Cook in syrup until transparent. If syrup is thin, boil down and pour over apples. If red apples are desired, add six cinnamon candies for each apple.

C. J. Oldenburg, Minnesota.

Crane Designs His Own Poster

Here is the reproduction of a poster in colors used by Philip Crane, son of J. E. Crane, Middlebury, Vermont. Apparently Philip is following in his father's footsteps to a considerable degree.

This is a very attractive poster. Note that it carries the "Good Housekeeping" seal of approval for Crane honey. By the simple expedient of the boy and the bread, anyone can grasp the idea of the deliciousness of honey, because bread is the usual carrier for honey. Notice also how Mr. Crane helps the grocer sell his other products, such as pancake flour, corn flakes, Quaker oats, and so on. Any grocer will be glad to put a poster of this kind in a window in his store.

Beekeepers are slow to realize the sales helps so evident in the distribution of other products with which they are acquainted and which can be so readily adapted to honey sales.

Influence of Colloidal Constituents on the Granulation of Honey

By
H. S. Paine and R. E. Lothrop
Carbohydrate Division
Bureau of Chemistry and Soils
U. S. Department of Agriculture

IN previous articles [(1) to (4)], the authors have discussed a number of influences that colloidal, or "gummy," substances exert on various properties of honey, such as color and clarity, foaming and scum formation, development of color in honey, and turbidity. At first sight, it may seem strange that these very finely divided suspended substances, present only in relatively small quantities, should exert such pronounced influences on so many of the outstanding and characteristic properties of honey. However, in view of our present knowledge of the chemistry of colloidal substances, this is not at all surprising, but is rather to be expected.

Present day methods of manufacturing and handling foodstuffs take into account to a much greater extent than previously the question of colloids and the colloid-chemical principles involved. In certain manufacturing processes, such as the making of jellies, butter and mayonnaise, the methods employed are based on colloidal phenomena, since these food products are characteristically colloidal, and their sales value depends on the stability of the suspensions of finely divided particles or droplets of which they are composed. In other cases, for instance the sugar industry, particularly the manufacture of refined sugars, colloids are detrimental, since they seriously interfere with many steps in the process of manufacture, such as filtration and crystallization, and in addition they tend to alter the character of the finished product. Therefore, in this case the manufacturing process is so designed as to eliminate colloidal substances to the greatest possible extent.

It has been only during the last few years, however, that any systematic study of the relations between the manufacture of sugar and colloidal chemistry has been made. At present considerable attention is being given this subject in widely separated parts of the globe, and much progress has been made, especially in overcoming certain technical difficulties encountered in the manufacturing process. Many difficulties encountered in the process of manufacturing other food products likewise have been traced to colloidal substances, so that at present it is generally recognized among food manufacturers that a thorough knowledge of the colloid-chemical principles involved in the particular process is of prime importance.

In view of the wide attention given to the subject of colloids in other food industries, it is rather surprising that up to the present time the presence of colloids in honey has hardly been recognized, and the influences that they exert on the properties of honey have never been investigated. Among the changes occurring in honey which are influenced by colloids, granulation is perhaps the most common, since nearly all types of honey granulate in time. Honey consists essentially of a solution of the two sugars dextrose and levulose in water. Granulation of honey is the separation of dextrose, the less soluble of these sugars, in the form of crystals. The crystals which separate are those of "dextrose hydrate," composed of the sugar dextrose combined chemically with water in the proportion of 10 parts by weight of the former to one part by weight of the latter.

Granulation, therefore, removes both dextrose and water from the honey, but relatively 10 times as much of the sugar as of water. The result is that the concentration of sugars decreases in the portion of the honey which remains liquid; or, in other words, the liquid portion of granulated honey contains a greater percentage of water and is thinner than the original honey. On the average, honies contain about 18% of water. According to our observations, the liquid portion of a well granulated honey contains about 2% more water on the average than before granulation took place. This increase in water content may have an important significance from the standpoint of fermentation of the honey, as a consideration of the following facts will reveal.

In honeys of average composition (18% water) the action of yeasts (which are always present) is very slow because there is not enough water present to allow the yeasts to grow readily, and therefore fermentation of the honey will not take place to any appreciable extent. But yeasts, like all other forms of life, are able within certain limits to adapt themselves to an unfavorable environment, in this case high sugar content and low water content. It has been found by some investigators that yeasts can adapt themselves to a water content as low as about 21%. This is not to be taken as a rigid, fixed lower limit of water content tolerated by all yeasts, or by a given yeast under all conditions, since a certain degree of variation occurs.

However, this value of 21% water serves to mark the point at and above which fermentation is to be expected. In honeys which contain more water than the average amount of 18%, the increase of 2% in the water content of the liquid portion of honey after granulation, brought about as discussed above, will bring the honey to or above the minimum water content tolerated by yeast, and active fermentation of such a granulated honey is to be expected. Thus it is seen that granulation becomes an important factor in considering and preventing the fermentation of honey.

In Germany and certain other foreign countries, extracted honey is frequently consumed in the granulated state, but in this country it is usually consumed in liquid form. For this reason, in order to delay granulation fo ar reasonable period of time, extracted honey generally requires processing of some kind before being packed for domestic retail trade. This is usually accomplished by carefully controlled heating.

At the present time heating is the only effective method known for controlling granulation. For a number of reasons this method is open to serious objections. In almost all cases loss of flavor, in addition to some darkening in color, results when honey is heated sufficiently for effective control of granulation. The heating of honey also wholly or partly destroys certain "ferments" or "enzy-

(1) Lothrop and Paine, "The Colloidal Constituents of Honey and Their Influence on Color and Clarity," American Bee Journal, Vol. 71, No. 6, pp. 280, 281 and 291, June, 1931.

(2) Lothrop and Paine, "The Colloidal Constituents of Honey and Their Effect on Foaming and Scum Formation," American Bee Journal, Vol. 72, No. 11, pp. 444, 450, November, 1932.

(3) Paine and Lothrop, 'Influence of Colloidal Constituents on the Development of Color in Honey," American Bee Journal, Vol. 73, No. 1, pp. 23, 27, January, 1933.

(4) Lothrop and Paine, "The Turbidity of Honey in Relation to Colloidal Constituents Present," American Bee Journal, Vol. 73, No. 2, pp. 53 and 57, February, 1933.

mes," such as "diastase." Enzymes are substances that promote certain specific chemical changes; for instance, diastase promotes the change of starch into sugar. Although in this country virtually no attention is given to the presence of diastase and other enzymes in honey (except when honey is intended for export to certain foreign countries), in Germany, France and Switzerland considerable importance is attached to the presence of enzymes in honey. This is partly based on the position taken by food authorities in these countries that honey which has been heated sufficiently to destroy the diastase even partly is to be considered as a denatured or adulterated product, and is no longer genuine honey.

Because of the low diastase value of certain exportations of American honey to Germany, considerable difficulty has been encountered by exporters of honey in this country during the past three or four years. Some rather large shipments of American honey to Germany were penalized because of low diastase content. Although in some cases this was later shown to be due to the inherently low diastase value of American honey of certain floral types, such as orange and alfalfa, part of the trouble undoubtedly was due to excessive heating of these honeys, which partly destroyed the diastase.

In addition to these objectionable features of controlling granulation by heat treatment, it has been found that subsequent granulation of heated honey, when it does occur, may result in the formation of rather coarse crystals. The gritty, lumpy character of honey that granulates in this manner makes it less desirable from the standpoint of table consumption. In addition, coarsely granulated honey is more difficult to liquefy than finely granulated honey.

It is quite apparent from the above discussion that a method for controlling granulation of honey other than by heating would be of considerable value. A number of attempts have been made in the past to control granulation by adding various harmless substances directly to the honey. Such methods are not effective, however, so that heating is still resorted to in order to control granulation.

Although a few investigators, including Dyce at Cornell University, Gubin in Germany, and de Boer in Holland, have studied certain phases of honey granulation, no comprehensive investigation of the various factors that control it has been made. In order to get a better understanding of the influence that colloids exert on granulation, a very brief discussion of certain phases of the granulation question will be necessary. The two most important factors relating to the granulation of honey are the manner in which crystals begin to form and the speed with which they grow, once the crystallization process has started. It so happens that colloids influence crystallization in both respects.

The growth of dextrose crystals in honey (called granulation) apparently takes place from very minute crystal centers or "nuclei" known as "prime crystals," which serve in a way as "seeds" from which the larger, visible crystals grow, and without which no crystals can be formed. Ordinary honey contains an abundance of these "prime crystals," so that under usual conditions granulation can proceed quite readily. If these "prime crystals" are removed in some way (as by heating) it appears that the spontaneous formation of additional "prime crystals" takes place only with the greatest difficulty.

The effectiveness of heat in delaying or preventing granulation in all probability is due to its action in dissolving most of the "prime crystals" present. Since the growth of the visible crystals takes place from these "prime crystals" or "seed crystals," it is easily seen that when many of them are present many crystals will be formed, whereas when only a few "prime crystals" are present, but few visible crystals will be formed. But in both cases the same weight of dextrose may separate, and therefore the crystals in the former instance will be small and fine, whereas those in the latter case will be large and coarse. When honey is heated, only a relatively few "prime crystals" escape solution and therefore when granulation subsequently takes place, the crystals formed may be large and coarse and gritty.

During the course of our investigations dealing with the effect of colloids on various properties of honey, it was observed that the tendency of honey to granulate was materially lessened by removal of colloids. In certain cases honey that ordinarily granulated solid within a few weeks remained liquid for months after the removal of colloids. This observation was somewhat of a surprise, since it might have been expected that the increased purity resulting from the removal of colloids would tend rather to speed up granulation. This effect may possibly be due to the removal of the crystal nuclei from which the growth of large crystals takes place. It is possible that most of the crystal nuclei are removed with the colloidal or "gummy" substances, so that very few , if any, "prime crystals" from which granulation may start are left.

Studies of cane sugar crystals conducted by Paine and Balch in this laboratory showed that suspended particles of impurities large enough to cause considerable turbidity in solutions of the sugar were in some cases found in greater proportion near the center of the sugar crystals. This indicates that such particles may act as stimulating nuclei for crystallization. It has also been observed by us that the clarity of the liquid portion of honey that has granulated is considerably greater than that of the original uncrystallized honey, which may possibly indicate that crystal growth has taken place around colloidal particles, thereby resulting in the removal of these particles from the liquid portion of the honey along with the sugar crystals.

Whatever may be the explanation, the fact remains that the tendency of honey to granulate is very materially reduced by removal of colloids. In many cases the effect is equivalent to that of a thorough heat treatment of the honey. Therefore, in addition to other benefits, the removal of colloids by some method of clarification would be of considerable value as a means of retarding the granulation of honey.

Study Stem Borer

The so-called stem borer is the larva of a lepidopterous insect. The swelling or "gall," caused by the bite of the insect, is its home and protection.

Although the stem borer which so seriously affected the blossoms of the fireweed plants in northwestern Washington during the summer of 1931 has not been reported as menacing the fireweed pastures during the season just past, studies are still being carried on in an effort to identify the insect and develop control measures by the Department of Entomology of the State College of Washington. The head of this department, Dr. R. L. Webster, is secretary-treasurer of the Washington State Beekeepers' Association.

N. N. Dodge, Washington.

from the Little Blue Kitchen

SHADE AND SHINE

(Dedicated to life's April days)

Once to a famous humorist
A curious-minded person said:
"It must be great to always be
So full of fun and jollity;
Life must be charming when the gist
Of everything that's said and done
Is merely food for so much fun,
And when there are no tears to shed!"

The man who wrote the "funny" things
Replied (his gaze upon a star)
"To make folks laugh, one's heart must know
The very dregs of grief and woe;
And he who of the sunshine sings
And who its lore of gold would gain
Must be acquainted with the rain—
For shade and shine twin sisters are!"

Lida Keck—Wiggins.

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Meals in April

MEALS in April might well be named after that erstwhile popular novel and movie, "The Strange Interlude." Foods suitable for winter are now too heavy; foods appropriate for summer are too light. What then can we give our families that will tickle their palates and agree with their tummies? Hard question. Honey Lady has been trying to solve it and perhaps Blue Kitchen readers will be interested in following several tried and true recipes, calculated to bring smiles on April days.

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Rhubarb

RHUBARB is ripe now along the sunny side of the garden fence, and can be used frequently if the methods of serving are varied, and it makes an ideal Spring viand when sweetened with honey. Use up that supply of granulated honey this way!

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Apples

A GOOD way to make up some of the apples still left over from the winter supply is to treat them like this:

Take 2 quarts of apples cut into small pieces; 2 cups of extracted honey; 1 cup of vinegar; 1 teaspoonful of cinnamon.

Heat the honey, vinegar, and cinnamon together and cook the apples, a few at a time, in the sirup until they become transparent. Pour the syrup which remains after all the fruit is cooked, over the apples. This makes a nice dessert, or a side dish to be eaten with the main course of a meal.

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Sweet Potatoes

A GOOD way, also, to create a sharpened appetite for sweet potatoes in the spring is to make up a dish in casserole as follows:

Peel and chop 6 medium sized sweet potatoes, and cook them in salted water. Then put through a ricer, or mash.

Add to this pulp 2½ tablespoonfuls of melted butter; and ¼ of a cup of pineapple juice, blent with 2 tablespoonfuls of extracted honey.

Beat all these together until a smooth mass is achieved. Then into a greased baking dish or casserole put about half of it. Over this lay fairly thin slices of pineapple. Fill dish by adding the remainder of the potatoes, and as a "finish" for the top, lay as many marshmallows as needed to cover the top layer. Place in a moderate oven, for about half an hour, being sure that the marshmallow "frosting" comes out tinted a delicate brown.

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HONEY Lady having learned that in Uncle Sam's laboratories a lovely "party dessert" had been concocted from honey et al, decided to serve it at a little gathering of young people. The "honey mousse" made such a hit, she has decided to tell Blue Kitchen girls about it. Perhaps if there isn't any ice available in some farm kitchens, big brother or dad will bring enough out in the car for use in making this delectable morsel. Only, these always-hungry males of the species must be watched else they "gobble" all the dessert before the guests arrive. It's THAT good, really. Well here 'tis:

Honey Mousse

4 eggs.
1 pint cream.
1 cup hot, delicately flavored honey.

Beat the eggs slightly, and slowly pour over them the hot honey. Cook until the mixture thickens. When it is cool, add the cream whipped. Put the mixture into a mold, pack in salt and ice, and let it stand three or four hours.

And Tea Cakes

And, this recipe for Honey Teacakes, sent to Honey Lady by Mrs. Edgar Hodge of Hilltop Farm, Mechanicsburg, Ohio, will suggest a lovely cake to serve with the mousse.

1 cup honey; (they have white clover honey at Hilltop Farm, and if this flavor is available, the cakes will be all the daintier).
½ cup sour cream.
2 eggs.
½ cup butter.
2 cups flour.
Scant ½ teaspoonful soda.
1 teaspoonful cream of tartar.

Bake thirty minutes in a moderate oven.

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A Different Bread

HONEY Lady's report of a conversation she heard concerning honey bread, has brought a query from one little housewife, who wants to know if we can tell her how to make honey bread. Honey Lady made it her business to find out how and "test out" how, and here it is, good friend, and I'm hoping you enjoy this "different" loaf as much as we have enjoyed it here.

Honey Bread

2 cups honey.
4 cups rye flour.
1 teaspoon soda.
4 teaspoons aniseed.
2 teaspoons ginger.
4 teaspoons powdered cardamon seed.
2 egg yolks.
¼ cup brown sugar.

Sift the flour with the spices and soda and add the other ingredients. Put the dough into shallow buttered pans to the depth of about an inch and bake in a hot oven.

The head baker at the bakery where the honey bread which Honey Lady heard being discussed is baked commercially, told her that he originally got the idea from a "Farmers' Bulletin" gotten out by the U. S. Department of Agriculture, so you see how good news travels right around in a circle sometimes.

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BUT that is the way all the good things of life move—in circles—Did you ever notice that? If not, the next time things seem to all be on the down grade, remember that as sure as the sun rises, so will the old wheel of life soon begin to turn upwards. It just can't be helped—that is the nature of wheels, and circles generally.

Producing Comb Honey With Modified Dadant Hives

By Scott M. Traxler
New York

I will give you my method of producing honey with the Modified Dadant Hive. I do not think the hive should receive all the credit, but part of it should go to the excellent vigorous young queens used. These queens are made sure of the fall before.

In the spring, I examine each colony to see if the queen is all right and laying as she should be. At the beginning of dandelion and fruit bloom, I place an extracting super on each Modified Dadant colony without any queen excluder between . This super makes room for surplus honey and more room for the queen as in many cases, the hive body itself will not accommodate my queens. I have had brood on nine of the eleven frames and on half of the frames in the extracting super and the brood was not scattered either, but the frames were well filled.

There are many dandelions and plenty of fruit bloom for the bees and then thornapples and a few other weeds to make a light flow until the white clover begins. When the bees begin to bring in white clover honey, I take the extracting supers off the strong colonies, shaking all the bees out of them and placing the extracting supers on the weak colonies above a queen excluder. The brood hatches out and the bees fill the combs with honey.

I then super the strong colonies for section honey, using two supers at once to begin with. When the combs are nicely drawn in the lower super, I reverse their position and place another or third super on top.

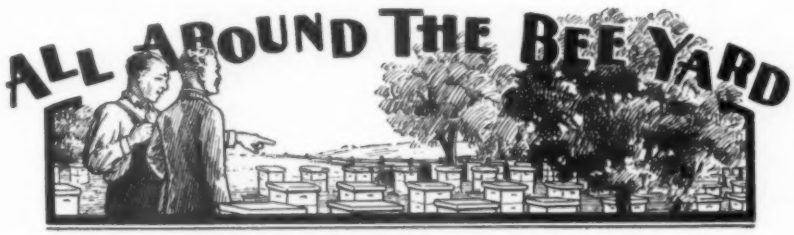
As soon as I find that the bees are working good in the two supers, I place the one on top underneath, and then put another new one on top. I always keep one super on top as a safety valve and continue to watch the honey plants and the nectar flow so as not to give the bees too much room which would result in light or poorly filled sections.

As the white clover and basswood stop, alfalfa and sweet clover begin, making a strong flow of fair length. When I think the white flow is beginning to end, I force the bees to fill all the supers and when I take off the honey, any sections that are not well filled and capped, I put back on the best working colonies to finish. As I crowd off the section honey supers well filled, I replace them with extracting supers to catch the close of the flow at which time the slowness of incoming nectars and the darker nectars would make No. 2 or unsalable sections.

By using the extracting supers early as I have described, I keep the bees from putting dark early honey in the sections and also give plenty of room, which prevents swarming. I even produce well filled individual sections of honey with this method by putting in a row of regular size sections on the outside and only giving these supers of individual sections to bees in the height of the honeyflow.

The plan I have described works well for me and I do not see why it would not work for others. The main key to success is a strong colony headed by a prolific queen.

As for quality of section honey, I have taken first premium on section honey at the Caledonia Tri-County fair for the past three years. This last year, 1932, 65 cases, just as I took them from the bees, graded as follows: 45 cases of fancy, 12 of No. 1 and 8 of No. 2.



By G. H. Cale

WELL, this is getting to be quite a department. There have been a number of letters about items mentioned in previous numbers. There were more comments about the remarks concerning wintering in our March number than any other one thing in that issue of "All Around the Bee Yard."

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After seeing the results of wintering in the last few days, I am inclined to place **great importance** on shelter from the winds and coziness on warm days. Wherever there are bees right now, that have been exposed to wind the past winter, the colonies are not in nearly as good condition as those that have been sheltered. Two yards without any protection whatsoever, but well sheltered from winds and in warm sunny locations, have wintered the best of any of the yards. Even those that have had packing are not to be compared with these two.

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I notice also a considerable difference in the amount of stores consumed this year compared with last winter. There have been less stores consumed this winter, and on the whole, the colonies are stronger than they were last year at this time. The winter compared to last has been much colder with below zero weather. Midwinter was warm and there were frequent flights followed by real cold weather.

— o —

Did you ever notice how many fall fed colonies are also the ones to be fed in the spring? Somehow or other the attempt to make up lack of stores by feeding sugar syrup is not frequently enough followed by freedom from feeding before the honey crop the next year. Where there is an abundance of food, spring manipulations are reduced to a minimum. There is nothing to take the place of sealed stores of honey as a winter feed.

— o —

How much matching of wits with weather there is in beekeeping. It is never safe to put off something which needs to be done until tomorrow, because tomorrow the weather may not be suitable; the roads may not be good; you may not be able to open hives and examine. This is particularly true in the spring.

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E. G. Carr (New Jersey) asks a question in regard to my observation concerning the flight of Caucasians and Italians (February). "What was the temperature when the observation was made? Have you any idea why the difference?"

No, Mr. Carr, I do not know why Caucasians did not fly as freely as the Italians, but on that day they did not do so, although as I observed they could have flown since they were right at the entrance and ready to go. I would judge that the temperature was about 50. My guess is that the Caucasians had already had the necessary flight, after confinement, the previous day, but the Italians were just getting at it.

— o —

Geo. Harrison, in Virginia, remarking upon the observation of the comparative flights backs me up. It makes me feel that after all perhaps I wasn't quite so bad a beekeeper as I had thought in trying to keep both races in the same yard. Mr. Harrison says, "You cannot make these observations when the two races are separated, even in the same yard, under certain conditions. Please keep your observations up and report on them further."

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And to please Mr. Harrison, I visited our Grimes yard the other day and found quite a little robbing. In every

case the colonies that were robbing were Caucasians. Both races in this yard too. (It has often been reported that the Caucasians do not rob as readily as Italians.) I presume in this case the explanation is again in the lower temperature and earlier flight of the Caucasians.

—o—

Did you ever notice the almost unobservable robbing which takes place at the entrance of colonies in the first flight days of early spring? How much does this result in distributing foulbrood, where it is present? It is something which I do not like to see. You have to watch pretty closely sometimes to notice robbers unobservingly sneak in at the sides or get by the guards, particularly of the weaker colonies. In one of the first flight days this month, I found a colony dead, with sealed stores, and not a bee around it. The following day that same colony would have been a den of robbers. I was just a day ahead of them. Good work!

—o—

I have heard it said on pretty good authority that bees when they start to raise brood in winter, will usually continue to raise brood right along until spring. I don't know where that observation comes from. We looked at bees here in January after several nice flight days and found that they had brood. A month later, February, in looking at the same bees, they had no brood at all, just a nice quiet cluster. So that knocks that idea out as far as I am concerned. I always thought, too, that the clusters formed lengthwise of the hive, but they do not always do so. They may stay at the back and frequently extend from side to side, being very narrow from front to back.

THE EDITOR'S ANSWERS

When stamp is enclosed, the editor will answer questions by mail. Since we have far more questions than we can print in the space available, several months sometimes elapse before answers appear.

DIVIDING FOR INCREASE

In your May issue you tell how to divide for increase. You say give the new colony a new queen. How will I do this? If you just put her in they will kill her, if you put in an introducing cage they will rear young queens.

I have eight very mean colonies I want as soon as the honey is in for the season, to kill the queen and give them a good three-banded queen. How will I introduce her? ARIZONA.

Answer.—When you make a new colony by division, a queen may be introduced with very little risk in the queenless half by inserting a fertile queen, in a queen cage, in the center of the brood combs and leaving that queen caged 24 to 48 hours.

It is important to insert her in the hive at once after making the division, before the bees have time to perceive that they have lost their queen. It is also important not to leave any worker bees in the cage with her, as these worker bees might cause ill feelings on the part of the bees of the hive.

By using care there is less than five per cent of loss of queens. There should not be any loss at all, especially if the queen is introduced to a division having mainly young bees and very few field workers.

UNITING PACKAGE BEES TO WEAK COLONY

Will you kindly tell of a good method of putting in package bees with a weak colony to keep them from fighting and destroying each other? PA.

Answer.—To make the home bees agree with the package bees, it is only necessary to feed both lots with all the sugar syrup they will take, just before uniting them. Of course, there should be but one queen in the entire lot.

QUEEN LOSS

1. While inspecting my ten colonies today, I found a dead queen in front of one of them. This was a strong colony in the fall and I requeened it with a young northern bred queen last August. It was a two-story standard ten-frame hive and I figured there was 50 pounds or more of honey last fall. What would be the best thing to do? Would it be all right to leave it until early in April and then open it up and if there is no queen, requeen with a southern queen?

2. About how much sugar syrup should one feed every day or at intervals to a 2-pound package of bees hived on full sheets of foundation in the latter part of April? MICH.

Answer.—It is impossible to guess the cause of that queen's death. It is quite probable that the colony still has a queen so what you suggest is quite right to do. It is possible that a young queen was reared in one story of that double story hive, while you were giving a queen to the other part. That is sometimes the trouble with those two-story hives.

A two-pound package of bees does not need much feed but as the requirements depend upon how fast they breed and also whether they get any supplies from the field, you must rely on your own judgments to feed them. Examine them from time to time and see whether they are short. They should have a little honey always in the cells.

EARLY QUEENS

I want to know about the young queens in the hives in Spring. How many days does the mother queen lay the queen eggs in the queen cells to hatch them. MISSOURI.

Answer.—The mother queen lays male and female eggs. The male eggs are laid in drone cells and produce male bees or drones. The worker eggs that are laid in worker-cells can produce either worker bees or queens, according to the size of the cell and the food furnished. When workers wish to rear queens, they enlarge some cells to queen-cell size and feed that larvae in such cells with a large amount of what is called "royal jelly." Bees will rear a dozen or more of such cells at the time when they are wishing to swarm.

You should read some bee book, for it is necessary that you should know these facts of the natural history of the honeybee.

HONEY FOR FEED

1. Can I best feed honey from brood combs of diseased colonies by straining it and boiling it, or by boiling comb and all, and allowing to cool and then remove wax?

2. How long should frames be boiled to kill foulbrood?

3. Can undrawn or partly drawn sheets of foundation that have been in a diseased colony be used again?

4. Is there any danger of spreading the disease through comb honey or chunk honey supers? IOWA.

Answer.—It is probably best to melt the comb and the honey and allow it to cool to remove the wax, then boil it again a half hour to destroy the germs in the honey.

2. Boil frames a half hour. We prefer to burn them up and use new ones.

3. I would not trust frames of partly drawn foundation, but would use fresh ones.

4. Yes, there is danger of spreading disease, through anything which has been in a diseased colony. That is why so many people use fire to destroy everything, but that is not necessary if great care is used.

GRASSHOPPER BAIT AND BEES

I am sending you a clipping from one of the local papers, about killing grasshoppers with poison bran, and using molasses with the mixture.

I fear that this will be dangerous to bees as we sometimes have a honey dearth about the time grasshoppers are bad. I would like to have your opinion about this. ILLINOIS.

Answer.—If the molasses used is "cheap" as the recipe designs, I doubt that the bees will be attracted by the mixture, unless they are starving, for molasses is not very attractive to them. Besides, the proportion is small. But if there is any indication of the bees working upon it, it will be well to protest against the use of such a mixture.

As a rule, it is a mistake to use poisonous substances against insects, because useful as well as injurious insects are killed, but when we see the devastation caused by such hordes as grasshoppers we cannot help wishing success to those who try to eradicate them.

The recipe follows: "Numerous experiments with different types of bait have shown rather conclusively that, all things considered, the best and most effective can be made in this way: To 100 pounds of bran add 5 pounds of white arsenic or if this can not be obtained, 5 pounds of paris green. Mix the poison and bran thoroughly and then add 12 gallons of water in which has been stirred 6 quarts of cheap molasses. Mix the bait thoroughly by shoveling, as one would mix concrete. Care should be taken not to add so much water that the bait becomes sloppy."

TO KEEP HONEY FROM GRANULATING

What can I put in honey to keep it from granulating. I have had calls for that kind of honey. ARIZONA.

Answer.—We do not put anything in honey to keep it from granulating. We heat it to about 140 degrees and evaporate some of its moisture. It does not always keep it from granulating, but is usually most efficient.

If the honey is already granulated, the melting of it over a pan of hot water, au bain marie as they say, is sufficient to keep it from further granulation.

Meetings and Events

(Continued from page 121)

methods of treating the infected colonies and infected material. There has been a great deal of argument recently regarding the feasibility of burning material but the fact remains that wherever effective control measures have been attempted the burning campaign has been a very successful factor. The proposition of cleaning diseased colonies is one which is open to considerable discussion. Most of the inspectors are convinced that treatment cannot be successfully conducted if left in the hands of the average owner. The only hope for success is when the work is conducted by the inspector and that entails considerable outlay of expenditure in state funds or of the individual owner.

The dream of every inspector is uniform inspection law, especially as it may apply to inter-state shipments of queens, bees and honey. A committee was appointed to study the matter of a uniform inspection law and this committee is already at work. There is Mr. A. G. Ruggles of Minnesota as Chairman. It is very difficult under the present circumstances to keep in touch with the many requirements which are prevalent in the individual states. A uniform law among the states would be a tremendous step in the direction which is recognized as necessary by those in charge of the inspection enforcement. It is expected that this committee on uniform laws will have a very comprehensive report to offer to the association and to the industry after its next meeting.

F. B. Paddock.

Cooperative Meetings for Northwestern States

Prof. H. A. Scullen of Oregon State College favoring closer cooperation of the beekeepers of the west coast, is urging a series of meetings in Washington, Oregon, California, Nevada and Arizona. This is a step in the right direction.

Cary W. Hartman,
California Betimes.

Death of Rollen R. Fooshee

Through Kathleen Williams of the Kansas Association and A. V. Small of Augusta, we learn of the death of Rollen Ray Fooshee, President of the Arkansas Valley Association and a beekeeper with two or three hundred colonies of bees at Piedmont. Mr. J. A. Hon of Piedmont is taking over Mr. Fooshee's bees and will continue the production of honey in that neighborhood.

Mr. Fooshee died of acute appendicitis at the age of 49 years, 5 months and 11 days, still a young man. In addition to being a beekeeper, he was also a stock man of prominence.

HART
CRYSTAL CLEAR
HONEY JARS

Display your honey perfectly. Dependable service on standard sizes. Hart fluted honey jars are made to specifications of Standardization Committee of the American Honey Producers' League.

Distributed by
DADANT & SONS, HAMILTON, ILLINOIS
and
G. B. LEWIS CO., WATERTOWN, WIS.
G. B. Lewis Co., 1921 E. Fourth St., Sioux City, Iowa
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HART
BOTTLES & JARS

Our 23rd Year Is Here!

and we have plenty Bees and Queens now ready to ship. We shipped the first package of bees from Mississippi and we can give you good service this season.

	1-10	10-1000
2-lb. Packages with Queens	$1.75	$1.50
3-lb. Packages with Queens	2.25	2.00
QUEENS		
Select Untested	.50	.45

MERRILL BEE COMPANY Buckatunna, Mississippi
(Mississippi's Oldest Shippers)

Mention the American Bee Journal When Writing Advertisers

The Gentlest Bees Under the Sun

Long Lived — Honey Makers

Bred from the best imported queens, native of the Caucasus Mountains, every daughter produced in yards thoroughly prepared for pure mating.

You will never know how good they are, until you try them.

MOUNTAIN GREY CAUCASIANS—the Gentlest Bees under the Sun.

PRICES

1-4	75c each
5-9	70c each
10-24	65c each
25-49	60c each
50-100	50c each

We will quote prices on large numbers and also on Caucasian packages with queens.

The Caucasian Bee Co., Repton, Ala.

NOTICE You are preparing to buy bees and queens. They are cheaper this year than ever. We do not know who is responsible for the low market. We do know that you have a right to demand just as much for your investment as when they were highest on record. For this reason demand the same quality as in the past. Through years of selection for high production and gentleness in handling we can offer you what you want and what you need. Our queens are produced on standard frames and on natural honey flow assuring you of a strong, vigorous queen to head your colony. **PUREST of ITALIAN STOCK.**

We guarantee you against loss and annoyance of delayed shipments. We believe we can please you in service and prices. Write us for particulars.

LOUISIANA SOUTHERN BEE FARM Route 2. BATON ROUGE, LOUISIANA and SHELDON, IOWA

Buy "St. Romain's Honey Girl" Italians

They are Hardy, Thrifty and Gentle

"Feb. 12, 1933.—I placed an order for 30 3-lb. pkgs. for April 20th.—I can not say that I found much difference in production between the 3-lb. and 4-lb. pkgs. although they did much better than any 2-lb. pkgs. I ever had. There was one 3-lb. and one 4-lb. pkg. that produced 220 lbs. surplus.—Some day when I get my bees to be as gentle as those I get from you, it will be a pleasure to work in them.—B. R. Goetze, Minden City, Mich."

"July 13, 1932.—Enclosed find money order for six queens.—I saved two of the last year's queens and to date each of the colonies have stored 50 Hoffman Frames of honey. They are real sky scrapers and boiling over with yellow bees that it is a pleasure to work with.—W. B. Hess, Liverpool, Ill."

PRICES FOR SHIPMENTS DURING APRIL AND FIRST WEEK IN MAY

Package	1 to 9	10 to 49	50 or more
2½ lbs. bees with queen	$2.00 each	$1.95 each	$1.90 each
3 lbs. bees with queen	2.25 each	2.15 each	2.10 each
4 lbs. bees with queen	2.70 each	2.60 each	2.55 each

We ship package bees combless unless you prefer and advise us to ship with a comb or brood, and provided your State Law permits same.

Two Special packages	1 to 9	10 to 49	50 or more
Full 2-frame nucleus and 2 extra pounds bees and queen	$2.60 each	$2.50 each	$2.45 each
Full 2-frame nucleus and 3 extra pounds bees and queen	3.00 each	2.90 each	2.85 each

Select young queens 45 cents each; 100 for $43.00.

State apiary certificate with each shipment, prompt service, safe arrival and a satisfactory deal guaranteed. Fifteen years' experience shipping package bees and queens.

"St. Romain's Honey Girl" Apiaries :: Hamburg, La.

Mention the American Bee Journal When Writing Advertisers

Woodman's Folding Wire Veil

Gives clear vision; folds flat when not in use.

New price . . .

70c

(80c postpaid)

A. G. Woodman Co., Grand Rapids, Mich.

THRIFTY BEES

Accredited and Certified by Alabama Department of Agriculture.

2-lb. Package with queen $1.75
3-lb. Package with queen 2.25
Untested queens each .45
Write for quantity prices.

We breed only three-banded Italian bees. Our shipping crates are light, but strongly constructed. Each package contains sufficient overweight to give a full weight package on arrival. Only young, THRIFTY bees shipped. THRIFTY bees are guaranteed to please.

W. J. Forehand & Sons
Ft. Deposit, Ala.
Since 1892

Hilbert Method CUT COMB HONEY

Write for our new catalog which will include free, full information on Cut Comb Honey.

James E. Hilbert, Traverse City, Mich.

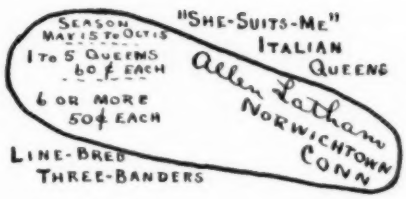
MIDDLE TENNESSEE APIARIES

OFFER LEATHER COLORED ITALIAN QUEENS BRED FROM MOTHERS IMPORTED FROM NORTHERN ITALY.

1 to 6 queens, 45c ea.; 7 to 25 queens, 40c ea.; 26 to 50 queens, 35c ea.; 51 to 75 or more, 30c ea.

JOE B. TATE & SON
1029 LISCHEY AVE., NASHVILLE, TENN.

Hessmer, La. — Lake Pearl Apiaries
High Quality Italian Bees and Queens for Season of 1933 at Reduced Prices
1 fr. brood, 2-lbs. bees and queen, **$1.75**
2 fr. brood, 3-lbs. bees and queen, **$2.25**
Special Orchard Package
A 2 frame nucleus with additional 5-lbs. of bees and a queen **$3.75**
Guaranteed Safe Delivery.
Lake Pearl Apiaries — Hessmer, La.
Isaac Roy, Prop.



STATEMENT OF OWNERSHIP

Statement of the ownership, management, circulation, etc., required by the Act of Congress of August 24, 1912, of American Bee Journal, published monthly at Hamilton, Illinois for April 1, 1933.

STATE OF ILLINOIS, } ss.
County of Hancock, }

Before me, a notary public in and for the state and county aforesaid, personally appeared M. G. Dadant, who, having been duly sworn according to law, deposes and says that he is the business manager of the American Bee Journal, and that the following is, to the best of his knowledge and belief, a true statement of the ownership, management, etc., of the aforesaid publication for the date shown in the above caption, rendered by the Act of August 24, 1912, embodied in Section 443, Postal Laws and Regulations, printed on the reverse side of this form, to-wit:

1. That the names and addresses of the publisher, editor, managing editor and business manager are:

Publishers, American Bee Journal, Hamilton, Ill.

Editor, C. P. Dadant, Hamilton, Ill.

Managing editor, G. H. Cale, Hamilton, Ill.

Business manager, M. G. Dadant, Hamilton, Ill.

2. That owners are:

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That the known bondholders, mortgagees and other security holders owning or holding one per cent or more of the total amount of bonds, mortgages or other securities are: None.

(Signed) M. G. DADANT,
Business Manager American Bee Journal.

Sworn to and subscribed before me this twenty-second day of March, 1933.

MINNIE S. KING,
Notary Public.

My commission expires Nov. 19, 1933.

Starting May 15th

ITALIAN QUEENS BRED for Comb Honey Production

These bees will make the finest comb honey you ever saw. Untested, 75c each, any number. 100% satisfaction guaranteed or your money back.

M. P. ILGENFRITZ, Jr.. Castleton, Md.

Choice Bright Italian Queens Queens that are a pleasure to work with and be proud to own. Requeen with stock that has been bred and selected in the North the past 30 years for good winterers, hustlers, gentleness and fine color. One queen 75c; dozen, $8.00. Breeding queens, $6.00 each.
Emil W. Gutekunst, Colden, N.Y.

Chance!

You may buy bees and queens that are highly advertised at a low price, but when the season's crop is harvested will you be satisfied? Will your year's work and investment show a profit? Will the time you spend with your bees be a pleasure or a disagreeable task? Will you know next season where you can buy bees and queens without guessing?

All of these questions can be answered with a YES if you buy from L. L. FOREHAND. He has spent twenty years perfecting a race of bees that can not be beaten for honey gathering, gentleness, beauty and disease resisting.

L. L. Forehand will guarantee every package of bees and every queen to reach you in good condition and to give perfect satisfaction or will replace without cost or refund every penny you have paid out.

Our prices are lower than ever before. Let us quote you on your needs.

L. L. Forehand Apiaries
Jesup, Georgia

Choose Labels Wisely

You Can't Go Wrong with A-B-J Labels

They sell honey and are priced right.

Send for complete catalog

AMERICAN BEE JOURNAL
HAMILTON, ILL.

Three-Band Italian Bees

IN COMBLESS PACKAGES

3-lb. Package without queen $1.60
With queen, $2.00 each.

25 per cent overweight shipped.

D. C. JACKSON -:- Funston, Georgia

SMITH'S

Accredited Bees and Queens

Our prices are very low. Our Superior quality bees and queens, plus our safe way in delivering them in perfect condition will be a big factor in your success. We have not lost a single package in FIVE years. There must be a reason. WRITE for prices, guarantee and particulars.

N. B. SMITH & CO. - - CALHOUN, ALABAMA

STRAWBERRY PLANTS

Best Varieties for Home and Market

Senator Dunlap.

By far the most popular variety grown. Perfect flowering, high quality, hardy and productive.

100 by mail postpaid $1.00
200 by mail postpaid 1.75
500 by express collect 2.50
1000 by express collect 4.00

Mastodon Everbearing.

For the home garden. Produces berries from June to October.

100 by mail postpaid $1.75
200 by mail postpaid 2.75
500 by express collect 4.50

Premier.

A perfect flowering early berry which is very popular. Not a free plant maker.

100 by mail postpaid $1.25
200 by mail prepaid 2.25
500 by express collect 3.00
1000 by express collect 5.00

Blakemore.

Blakemore is a new spring bearing variety. Vigorous plants and increases rapidly. Fruit high quality, stands shipping well.

100 by mail prepaid $1.25
200 by mail prepaid 2.25
500 by express collect 3.00

All plants are grown for us by Melvin Pellett at his Iowa nursery. Orders are filled with fresh dug, vigorous, young stock.

Address all orders to

DADANT & SONS :: Hamilton, Illinois

Here Is Your Chance for Low Cost Production

Low cost of honey production is an outstanding feature of the bee industry in the Northwest. Thousands of acres of sweet clover and other valuable honey plants promote high yield and fine quality.

Among the most favorable localities for bees are the Red River Valley in Minnesota and North Dakota; Milk River Valley, Lower Yellowstone Valley, Valier Project, Kootenai Valley in Montana and Idaho, and the Pacific Coast Region in Washington and Oregon.

Beekeeping and the production of honey is increasing rapidly. Growers are enlarging their plants, and many important growers have recently established their plants along the Great Northern Railway in these states.

Diversified farming and all kinds of livestock are similarly favored by low cost production.

Write for free book on any of these states and detailed information about bee raising and farming opportunities. Low Homeseekers' Round Trip Excursion Rates.

E. C. LEEDY
DEPT. J., GREAT NORTHERN RAILWAY
ST. PAUL, MINNESOTA

Mountain Gray Caucasians for 1933

We are offering you Caucasians bred from the best of breeders at the lowest prices in our history. They are unexcelled for gentleness and honey production. Let us book your order now without deposit for April and May delivery.

Untested queens: 1 to 5, 75c each; 6, $4.25; 12, $8.00; 13 to 49, 65c each; 50 and more, 60c each. Tested, $1.50. Select tested, $2.50.

2-lb packages with queens: 1 to 5, $2.75 each; 6 to 24, $2.50 each; 25 or more, $2.25 each; larger size packages, add 60c per pound.

2-frame nuclei, $2.50 each; 3-frame, $3.00 each.

The evidence of our honest dealing plus quality Caucasian bees and queens, is the fact that our customers sent us in 1932 about double the volume of business of any previous year.

No disease, pure matings and safe delivery guaranteed.

Bolling Bee Co. :: Bolling, Ala.

Appearance Sells Comb Honey

Its Quality and Flavor Bring Repeat Orders

DADANT'S SURPLUS FOUNDATION

Is Pure Beeswax and Made to Become a Part of the Comb

Each sheet is dainty and clear, with a delightful fragrance. It is truly a fitting base upon which to build that most splendid product of the hive—section comb honey.

Write for Name of Nearest Dealer

DADANT & SONS
Manufacturers of Wired, Plain and Surplus Foundations
HAMILTON, ILLINOIS

GoodCombless PackageBees&Queens

THREE-BANDED ITALIANS. GENTLE HONEY PRODUCING STOCK.

With Queens	2-lbs.	3-lbs.
1 to 5	$2.00 ea.	$2.50 ea.
6 to 14	1.90 ea.	2.40 ea.
15 to 50	1.75 ea.	2.25 ea.
Packages without queens	60c each, less	

Express or mail shipment.

Select young laying queens, 65c each; ten, 60c each; twenty-five or more, 50c each.

Accredited by the Alabama Department of Agriculture and as good as money can buy.

H. C. SHORT, Fitzpatrick, Alabama

Special Bargain Book Offer

We offer a few copies of slightly shop worn books.

"Beekeeping in the South" by Kenneth Hawkins, for 29 cents each postpaid. This book was published to sell for $1.25 and the damage to these copies is so slight that you probably would not notice it. To be sure of getting one of these copies send your 29 cents today. Stamps will do if more convenient to you.

American Bee Journal :: Hamilton, Ill.

RED STICK
Packages and Nuclei

We handle only three-banded light Italian bees. We guarantee purely mated select young queens. Our cages are lightly constructed and are very easy to handle in the hiving process.

Each consignment is made with the Louisiana State disease free certificate.

2-lb. Package with Queen	$1.50
3-lb. Package with Queen	2.00
2-fr. Nuclei with Queen	2.00
3-fr. Nuclei with Queen	2.50
Orchard Packages (5-lbs.)	3.00

Queens sent by parcel post, postpaid:

Select Queens, April and May	40c each
After June 1st	35c each
Tested Queens	50c each

We solicit Canadian trade. We are prepared to accept from our customers in Canada **their money at par.**

As in the past, we shall have queens available in April and May for package shippers from the South at wholesale prices.

We guarantee delivery of packages and queens in perfect condition.

LOW PRICES
LARGE APIARIES
RESPONSIBILITY

RED STICK APIARIES
Post Office: Montegut, Louisiana
Telegraph Office: Houma, Louisiana

Crop and Market Report

Compiled by M. G. Dadant

For our April Crop and Market Report, we asked reporters to answer the following questions:

1. How is honey cleaning up?
2. Is jobbing demand any better?
3. How are bees coming through winter?
4. Honey plant and climatic conditions.

Honey Cleaning Up

In the New England states, practically all reports except Vermont and Connecticut are to the effect that honey is cleaning up very satisfactory. As a matter of fact the same holds true over the entire country. There is considerable honey yet left in Florida but outside of this, the entire Southeast and the Atlantic Coast regions seem to have been very well cleaned up of honey. Louisiana still has considerable left on hand, but Texas and Arkansas, and states immediately north seem to be fairly well cleaned up.

In the central western states, Michigan reports quite a number of large lots still on hand and going begging at a very low price. This is also true of a number of producers in Illinois and a few in Iowa.

The plains states seem to be fairly well cleaned up of honey except that Nebraska and Kansas still have some left on hand, although hoping to clean up before the new crop. In the intermountain territory, Colorado reports quite a considerable quantity on hand, at least four full carloads available according to one reporter. In Idaho also, there seems to be considerable left, one reporter stating that he knew of two cars which could be gotten at moderate prices. Outside of this, however, the clean-up seems to be fairly good.

Jobbing Demand

Contrary to the good sales of honey, comes a very slow demand in a jobbing way. As a matter of fact for the present year, one might consider that the jobbing demand is absent because such a large proportion of the honey has been sold through wholesalers or direct by the beekeepers to stores and chain groups. It does look like there had been a short cut everywhere with beekeepers to get their honey sold at something like a satisfactory price by dodging the middle man. How far this will hurt the honey market when conditions improve and the beekeepers do not want to take the time to do their own marketing, is a question. It is certainly true that the jobbing demand has been very much less this year and beekeepers have more than made up for it by an effort to sell direct.

Bee Conditions

In the New England states, bees seem to be in satisfactory condition as also is true in New York. In New Jersey there seems to be less than the average condition of bees. The Atlantic seaboard reports bees 100 per cent except that possibly the warm winter will mean that they have taken up a large proportion of their stores and made them run short. However, with a break in the weather immediately, the early honey flora should be available.

Georgia and Florida report bees in good shape with possibility of a little starvation before the honey plants yield. Throughout the balance of the Southeast, the bees seem to be in fairly good condition but backward because of setbacks on account of rain and cold.

In Texas, conditions are normal or a little above, and the same thing rules with practically all of the central western states except that bees in many instances are bound to be effected by the open winter and the consequent using of stores followed by a cold snap after brood rearing has started. However, we would not estimate that conditions are under 80 per cent in any of the central western states. The plains states are perhaps in as good condition although likely somewhat less. Of course all cellar wintered bees have been under cover and still are at the date this is written so that the accurate conditions cannot be stated. It is apparent, however, that they will come through in good shape. In the intermountain territory, conditions are satisfactory although Colorado reports the bees 90 per cent of average and Nevada 75 per cent. The great question out there also is to whether bees will have sufficient stores to carry them through until the new crop comes along.

Conditions in Oregon and Washington seem to be below normal on account of very unfavorable weather. In California also, bees bred up early and this has been followed by a cold snap so it is a question whether the bees will be able to carry through without heavy feeding.

Honey Plant Conditions

The condition of honey plants is very spotted this year, probably due to the fact that many localities have not had the rains they should have had so as to carry the plants through in a satisfactory manner. In the New England states, Connecticut seemed to fare the best, with Vermont and New York reporting perhaps 50 per cent of average because of lack of snow particularly in New York and the freezing and thawing of early spring. The Atlantic seaboard is particularly favorably located this year and it looks like there was a fair crop in prospect with anything like satisfactory weather. The same thing holds with practically the entire Southeast, perhaps the states of Alabama and Mississippi reporting somewhat under average conditions. Louisiana will be 100 per cent. Texas reports the season late and the effect of late freezes as problematical with likely about 80 to 90 per cent of average conditions.

Throughout the Central West, there seems to be the prevalent idea that there is going to be something like a satisfactory white clover crop this year. In fact better than there has been for several years. The southern sections of Michigan, Wisconsin and Minnesota, however, have suffered due to not having sufficient snow. The drought has been followed by light snows and this by freezing and thawing which put the white clover in a very precarious condition. It is a question just what the crop will be. The northern section of these states, of course has been covered with snow and conditions should be satisfactory there. Illinois, Iowa, Indiana and Missouri seem to be especially well favored on white clover prospects with Ohio perhaps just a little under.

In the intermountain territory also, we find the effects of an extremely dry fall and not enough snow during the winter. Some sectons are reporting white clover prospects as favorable. Others report large flowering of sweet clover with a question as to whether there will be a normal amount of forage for the bees. We would anticipate conditions in this plains territory as being about 60 to 75 per cent of normal.

In the intermountain territory, particularly in Colorado, there has been a continuation of the past year's drought and things look unusually unfavorable. Many parts of the ranges, however, particularly in Utah, there has been heavy snows and conditions are very favorable for bees. Idaho also reports favorable amount of water as does the western sections of Montana.

Along the Pacific coast, the states of Oregon and Washington report conditions as too dry and perhaps only about 50 per cent of normal. Northern California seems to be very favorably located with ample rains, but in the south central and southern sections, the early rains have not been followed by later ones and conditions are far under normal now. Perhaps 70 per cent. Along the coast, about normal conditions seem to prevail.

In the Canadian provinces, Ontario also is suffering from lack of fall rains and snow. In the prairie provinces, however, conditions are almost ideal. Bees are going through in good shape and there have been ample snows so that the prospects seem to be very favorable.

All in all, at this early date, we would anticipate that the condition of bees is about normal, but that the honey plant conditions are under normal.

We Are Cash Buyers of Honey and Beeswax
Submit samples, and best prices, freight prepaid Cincinnati. We also furnish cans and cases.
Fred W. Muth Co. Pearl and Walnut Cincinnati, Ohio

Renew Your Subscription
Write for Our Special Club Offers
AMERICAN BEE JOURNAL

Edwin H. Guertin 236 N. Clark St. Chicago
Buy and Sell All Grades Extracted Honey
References: 1st National Bank, R. G. Dun or Bradstreets Commercial Reports.

The BEEKEEPER'S EXCHANGE

Send YOUR Classified Ad in TODAY

Copy for this department must reach us not later than the fifteenth of each month preceding date of issue. If intended for classified department, it should be so stated when advertisement is sent.

Rates of advertising in this classified department are seven cents per word, including name and address. Minimum ad, ten words.

As a measure of precaution to our readers, we require references of all our advertisers. To save time, please send the name of your bank and other references with your copy. Advertisers offering used equipment or bees on combs must guarantee them free from disease, or state exact condition, or furnish certificate of inspection from authorized inspector. Conditions should be stated to insure that buyer is fully informed.

TESTIMONIAL

My ad in February issue brought wonderful results. I had ads in two hundred papers and magazines, and received more answers from the American Bee Journal's ad than any other. Signed—Chas. F. Mottet, Webb City, Mo.

If there is not room enough below, write your ad on a separate sheet and attach.

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AMERICAN BEE JOURNAL, HAMILTON, ILLINOIS.

Date ..... 1933.

Please publish my ad in the AMERICAN BEE JOURNAL ..... times starting with the ..... issue. I enclose remittance of $..... at your regular rate of 7 cents a word. I have counted each whole number as a word and also my name and address which is customary. Please classify properly and acknowledge promptly.

Name .....

Address .....

For Profitable Results—Fill in and Mail TODAY!

BEES AND QUEENS

THREE-BANDED Italian queens. Gentle and thrifty; as good as can be raised. Untested, 50c each; over six, 45c each. Jul. Buegeler, Alice, Texas.

ITALIAN bees and queens, two- and three-pound packages with young laying queens for early spring delivery. Write your needs. Service, satisfaction. Honey Bee Apiaries, Sandwich, Ill.

GOLDEN Italian Queens and Bees for 1933, ones that are guaranteed to please you. One two-pound package with queen, $2.00. Ten or more, $1.75. Each queen, 60c each. $7.00 per dozen. Safe arrival. Health certificate with each package. E. F. Day, Honoraville, Alabama.

CARNIOLAN and golden queens, tested, 75c and untested 50c each. 3 pounds of bees and queen, $2.00. 2 pounds of bees and queen, $1.50. Write for price of nuclei. C. B. Bankston, Buffalo, Texas.

GOLDEN Italian queens that produce good workers and gentle to handle. Safe arrival and satisfaction guaranteed. Select tested, $1.50. Tested, $1.00. Untested about May, 50c. D. T. Gaster, Rt. 2, Randleman, N. C.

CALIFORNIA PACKAGE BEES & QUEENS—Young three-banded bees shipped in new non-returnable packages, our YOUNG ITALIAN QUEENS are HOME GROWN, and the best that money can buy. Write today for new low prices. Thos. C. Burleson, Colusa, California.

LIMITED number of package bees with young Italian or Caucasian queens at astoundingly low prices. To buy before you get our quotations would be a mistake. Prompt shipment and satisfaction guaranteed. H. G. Graham, Lane City, Texas.

FOR SALE—Pure Italian Queens, Bees, the red clover kind. Queens, 40c each. Per doz., $4.50. One pound of bees with young queen, $1.50. 2-lbs. bees with young queen, $2.00. All charges paid to your post office in U. S. A. Graydon Bros., Route No. 2, Greenville, Alabama.

SELECT GOLDEN ITALIAN QUEENS. April delivery, 55c; May, 50c; June on, 30c. Satisfaction guaranteed. Victor Prevot, beekeeper, Mansura, Louisiana.

WESTERN headquarters for package bees and Italian queens. One hundred two-pound packages with select, young, laying queens, $1.20 each, three-pounds, $1.60 each. Most northern breeder in the West. Less express charges. Free circular. J. E. Wing, Cottonwood, Calif.

FOR SALE—Golden Italian queens and package bees, one grade. Selected untested, 50c each; $3.00 for six; $5.00 per doz. 2-lb. package, $2.25 each. Satisfied customers for over 30 years. Satisfaction guaranteed in U. S. and Canada. E. A. Simmons Apiaries, Gerenville, Alabama.

ITALIAN queens, 50c. Bees, 2-lb., $1.90. 3-lb., $2.40. Orchard package on 3 frames equal to six pounds, $3.50. Will trade for white honey. Homer W. Richard, 1411 Champnolle, El Dorado, Arkansas.

PACKAGE Bees and Queens—Three banded Italians. Lower prices for 1933. Two-pound package with queen, 5 to 100, $1.25 each. Two-pound package without queen, 5 to 100, $1.00 each. Three-pound package with queen, 5 to 100. $1.75 each. All shipments are made by express. Safe arrival guaranteed. Health certificate with every shipment. Little River Apiaries, Box 83, Gause, Texas.

PACKAGE BEES AND QUEENS will never be sold for less than now. Express rates are down. Now is the time to stock up. Investigate our prices and quality stock. California queens, Italians or Caucasians. Write today to Frank & St. John, Ripon, California.

CAUCASIAN QUEENS from my northern bred acclimated stock give satisfaction, none better. Untested, one to 25, 60c. 26 up, 50c. June delivery. Book orders early. Bird's Apiaries, Odebolt, Iowa.

HONEY FOR SALE

HONEY FOR SALE—Any kind, any quantity. The John G. Paton Company, 230 Park Avenue, New York.

FOR SALE—White clover honey in 60-pound cans. None finer. Satisfaction guaranteed. J. F. Moore, Tiffin, Ohio.

NEW CROP shallow frame comb honey, also section honey; nice white stock, securely packed, available for shipment now. Colorado Honey Prod. Ass'n, Denver, Colo.

HONEY FOR SALE—Keep your customers supplied with honey. We can furnish white and light amber honey at attractive prices. Packed in 60-lb., 10-lb. or 5-lb. tins. Dadant & Sons, Hamilton, Ill.

FOR SALE—Northern white, extracted and comb honey. M. W. Cousineau, Moorhead, Minn.

NEW crop honey. Choice sweet clover extracted. Thomas Atkinson, R. 5, Omaha, Neb.

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Send Cash, Money Order or Wax to avoid delay.

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Also sell Combless packages with queen, same price as comb packages.

All bees are shipped on Standard Hoffman frames of brood and enough honey for feed in transit. Safe arrival guarantee and a health certificate with each shipment. Shipping Season opens April first. Orders booked with 10 per cent down, balance 10 days before shipment. Address—

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2-lb. package of Italian bees with queen, $2.00. 3-lb. package bees with queen, $2.50. Write for prices on large lots.

Forehand's—the standard for over a quarter century.

Safe delivery and perfect satisfaction guaranteed in U. S. and Canada.

N. FOREHAND, De Land, Florida

ADVERTISING PAGES REMOVED

The POSTSCRIPT

GOSSIP ABOUT THE OFFICE IN THE MAKING OF THE MAGAZINE

Letters from our advertisers indicate that the queen breeders and package shippers are having troubles of their own. Because of shortage of cash, buyers are shopping around in an effort to get the most possible for their money. Shippers in their anxiety to get the business are cutting prices below the safety line and as a consequence losses are sure to result.

While we all want to make our money go as far as possible, we must realize that the shipper cannot continue for long if he sells below the cost of production. It won't pay to drive the price down too far. Better buy a smaller number of bees and get good ones. It is only the man who gets a fair price who can continue in the business.

— : —

It is time to realize that embargoes hamper the normal volume of trade. As Herman Rauchfuss expresses it, "When you step on a crooked stick it is likely to hit you in the face." While there must be reasonable restrictions as a protection against disease, there should be no objection to the movement of bees which are free from disease, no matter how they are caged.

The tendency of the times is to place more and more restrictions on trade through license, tariffs, embargoes, etc. Always the aim is to shut out the other fellow from our markets, but in the end we must suffer along with him. Too often we are unwilling to admit the real object of the restraint.

— : —

Reports from Canada tell us of more than a million acres of public land recently taken up in Alberta and Saskatchewan. The back to the land movement is assuming large proportions.

Librarians tell us of more requests for information on bees and other small farm projects than ever before. The same is true of many public agencies relating to agriculture.

— : —

A letter from a Canadian correspondent states that he has enquired at the customs office concerning the cost of getting some American goods across the line. He found that by the time he had paid exchange, duty, sales tax, excise tax and freight, one hive with supers and foundation would cost him about $32.00. Is it any wonder that there is no longer much export trade? With the embargoes already mentioned slowing down trade between the states, we are on the way back to the old time conditions under which it was necessary to produce the most of the family needs at home. If we are to regain our former prosperity trade restrictions must be removed.

— : —

With all the selection of better stock in plants and animals no one seems to have thought of selecting the plants which yield nectar most profusely. Probably some sweet clover or buckwheat plants yield much more freely than others. By selecting these might we not increase the available bee pasture as successfully as breeders have increased the egg laying of their hens?

— : —

With reference to the laying of queens in artificial cells, E. G. Carr calls attention to the fact that E. L. Pratt published a booklet entitled "Forcing Queens to Lay in Swarthmore Cups" many years ago. Another instance to prove that there is nothing new under the sun, as was stated by a very ancient writer.

— : —

Prof. Walden reports that his bees located about twelve miles from the mouth of the Connecticut River get a dark honey when working on alsike clover. He is puzzled as to the reason. Perhaps some New England beekeeper can throw light on this problem. Honey is known to vary greatly in both color and flavor from the same plant under different climatic conditions, but alsike is not one of the plants commonly producing dark honey as far as I know. It is probably mixed with something else.

— : —

Prof. Kelty writes that the bank holiday was inconvenient as he had to get along for ten days with only 35 cents in cash. Other letters have been in the same vein. It was felt most keenly in the cities where everybody depends upon buying everything from the stores as used day by day. In the country no particular hardship is felt from a few days with an empty pocketbook.

— : —

Paul Lehmann of Ontario, Oregon, suggests that instead of saying "granulated" honey we call it "solid" honey, which is short and to the point and should be understood by anybody.

— : —

H. E. Weisner of Arizona writes that spring came about a month later to southern Arizona than in his previous experience. February was as cold as the usual January, and cottonwoods did not begin to put out leaves until well into March. I can never forget a winter day which I spent with Weisner which was like early June in Illinois.

— : —

D. D. Stover of Mississippi is probably the biggest shipper of live bees in the world. He sold more than 13,000 packages in 1932 which is a rather large volume of business in bees. It is interesting to note that Stover keeps up his advertising, in season and out of season, in good times and bad times. Stover says that beekeeping is the soundest branch of agriculture.

— : —

One thing Jay Smith overlooks in his article on the small mating hives, (page 125) and that is the matter of temperature. I am not yet convinced that queens mated in such small nuclei average as good as those which emerge and mate from nuclei more like a normal colony. When weather is uncertain temperature changes can hardly be controlled by such a small cluster of bees. A chilled cell or queen is of little value.

— : —

In view of the present volume of shipment of live bees, it is interesting to note that only twenty years ago a California farmer started a swarm of bees in a cage toward Lander, Wyoming. The bees were removed from the train at San Bernadino because the shipment was in violation of the postal laws. The disposition of the case was referred to the postmaster general. Now a carload of caged bees would arouse no particular comment, although more go by express than by mail.

— : —

When in 1916 as Iowa bee inspector, I advocated education as the short cut to effective disease control, I received but little public support. In the light of the events since that time I am convinced that the same amount of money spent in demonstration apiaries that has been spent in police efforts, would have accomplished more. In localities where demonstration apiaries have been well managed along with inspection, we find a much higher average level of beekeeping, with disease under better control than where dependence has been entirely upon police methods.

— : —

There are great possibilities in the cut comb honey as described on page 126, but the average beekeeper will find complications when he starts to produce it. So many things can happen to make it mussy that few will succeed. It takes an extremely careful person to cut out comb honey, drain it and pack it in such a manner that it will reach the housewife in satisfactory condition. The right person will do well with it, others had best stick to sections or extracted honey.

— : —

In the March Irish Bee Journal, editor Digges in response to a question as to the hive he recommends, says: "A ten frame British Standard brood box is good enough to play with. We recommend the Modified Dadant hive and outfit for your district."

Thus the world is slowly, but surely coming to recognize that the large hive is correct in principle. Men of prejudice may oppose it, but eventually it will be the practice of commercial honey producers to use some form of large brood chamber.

FRANK C. PELLETT.

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CONTENTS

Can We Afford to Clarify Honey?—A Question of Policy—*Gordon P. Dillon* ... 161
Properties of Cyanogas—*E. S. Miller* ... 162
The Human Puzzle—Who Is He? ... 163
To Lay Out a Bee Yard—*Walter H. Hull* ... 164
A Modification of Stepp's Transfer—*J. H. Sturdevant* 164
The Control of Fire Blight by the Use of Sprays —*Dr. H. R. Rosen* ... 165
Editorials ... 166
News Notes of American Honey Institute ... 168
Death of Miss Wilson and Mrs. Miller ... 169
More About Leaving Those Packages Alone —*Alfred H. Pering* ... 170
Tool Case for the Outyard—*S. F. Haxton* ... 170
Moving Colonies of Bees—*T. E. Babcock* ... 171
Foreign Marts Open to Northwest Honey —*C. M. Litteljohn* ... 171
Why I Use a Portable Extracting House —*Patrick J. McGlynn* ... 172
Some Observations on Robbing—*James S. Ch'en* ... 173
Manitoba Honey Producing Areas—*A. V. Mitchener* 174
Are Bees Guided by Scent?—*David G. Sanborn* ... 175
In Defense of An Outlaw—*Forrest L. Meuret* ... 176
Twenty-five Hundred Dollars for One Lesson in Beekeeping—*M. G. Eldred* ... 177
From the Little Blue Kitchen—*Lida Keck-Wiggins* ... 178
Editor's Answers ... 179
All Around the Bee Yard—*G. H. Cale* ... 180
Meetings and Events ... 182
American Honey Institute Honor Roll—*Page 1* ... 185
Crop and Market Report—*M. G. Dadant* ... 187
The Postscript—*Frank C. Pellett* ... 192

INDEX TO DISPLAY ADVERTISERS

American Bee Journal—156, 189, 190, 193, 194.
American Honey Institute—185, 194.
Beekeepers' Item—190.
Berry, M. C. Co.—193.
Bolling Bee Co.—191.
Bonkemeyer, Hazel V.—182.
Brower Bee Co.—190.
Brunson, J. G.—190.
California Bee & Tool Co.—191.
Calvert Apiaries—194.
Caney Valley Apiaries—157.
Caucasian Apiaries—186.
Caucasian Bee Co.—181.
Citronelle Bee Co.—Back cover.
Crowville Apiaries—180.
Cutts, J. M. & Sons—157.
Dadant & Sons—158, 184, 191, 194
Dittmer, Gus & Co.—193.
Ellison, C. G.—182.
Ferebee, L. L.—191.
Forehand, L. L.—189.
Forehand, N.—191.
Forehand, W. J.—182.
Garon Bee Co.—190.
Gaspard, J. L.—194.
Golden Rule—184.
Gooch Apiaries—182.
Graham, H. E.—157.
Gulf Coast Bee Co.—191.
Gutekunst, Emil W.—180.
Hann, Albert G.—184.
Hart Glass Co.—183.
Hilbert, J. E—182.
Hodgson & Sons, S. P.—189.
Holder Apiaries—156.
Ilgenfritz, Jr., M. P.—180.
Jackson, D. C.—190.
Jensen's Apiaries—193.
Knight, Jasper—Back cover.
Latham, Allen—180
Leahy Mfg. Co.—156.
Leedy, E. C.—186.
Lewis, G. B. Co.—160.
Lotz, Aug. Co.—186.
Louden Machinery Co.—191.
Louisiana Southern Bee Farm—190.
McVay, J. F.—190.
Marshfield Mfg. Co.—Front cover.
Merrill Bee Co.—183.
Merrill, G. H.—191.
Middle Tennessee Apiaries—191.
Mott, E. E. & Son—180.
Muth, Fred W. Co.—157.
Norma's Apiaries Co.—189.
Norman's Apiaries—191.
Pettit, Morley—181.
Red Stick Apiaries—Front cover.
Reif, E. H.—191.
Rivers, O. D.—189.
Root, A. I. Co., Chicago—Back cover.
Root, A. I. Co., Iowa—186.
Root, A. I. Co., Medina—Back cover.
Running, David—184.
Rusch, Arnold H. & Son—181.
St. Romaine's Honey Girl Apiaries—193.
Shaw & Homan—194.
Standard Churn Co.—Front cover.
Standard Lumber Co.—180.
Stover Apiaries—155.
Toombs Apiaries—Back cover.
W. & M. Products Co.—184.
Weaver, Roy S. & Bro.—156.
Williams, P. M.—184.
Woodman, A. G. Co.—191, 193, 194.
York Bee Co.—Front cover.

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